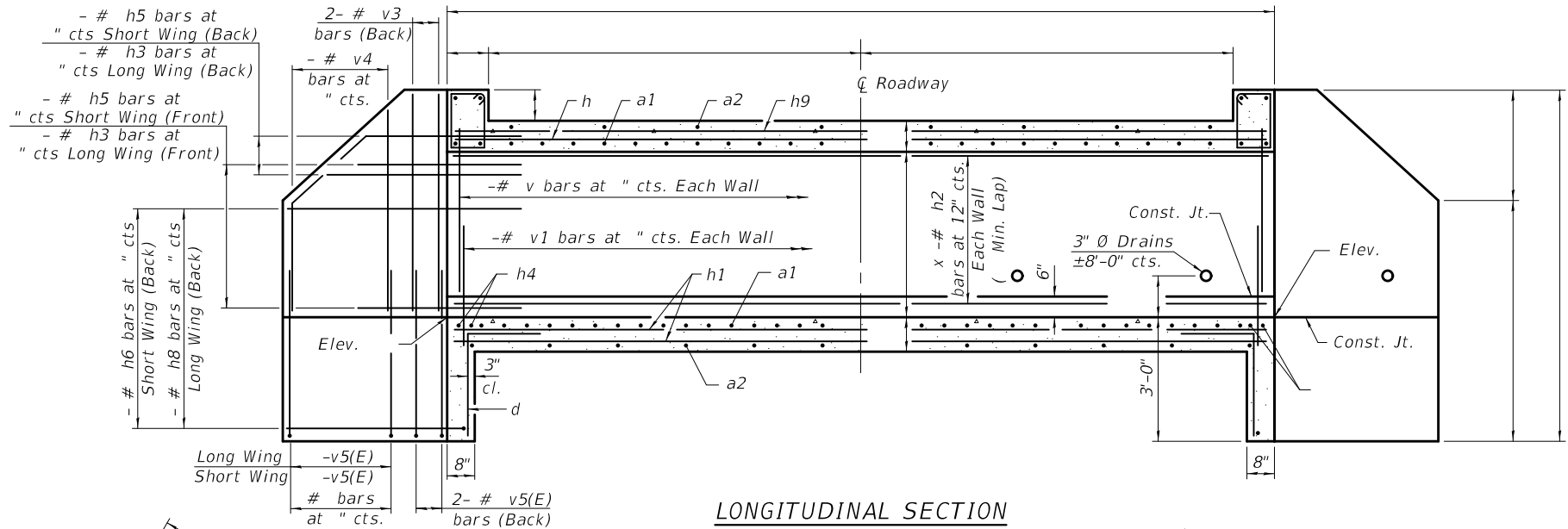
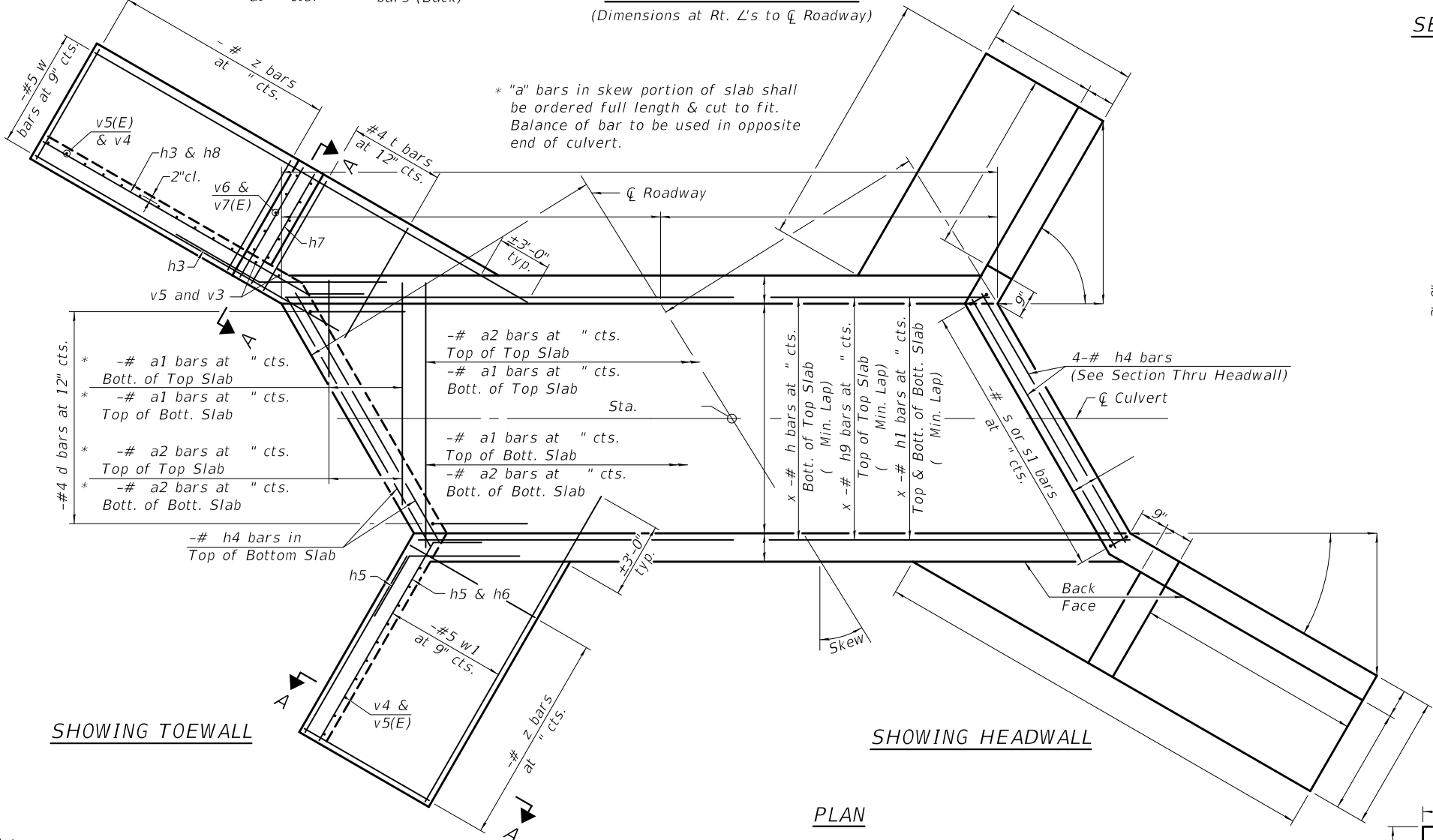


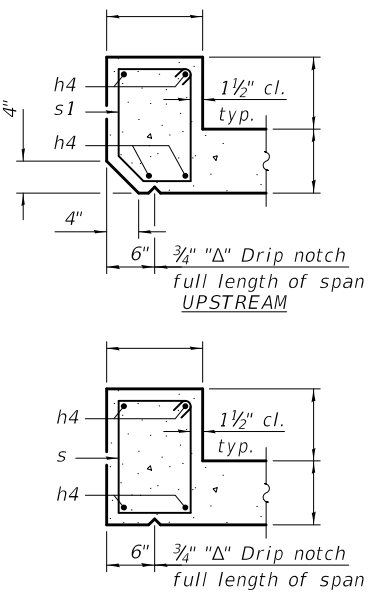
CELL / MODEL NAME	DESCRIPTION	DATE
TSA-SB-LT-LS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Left Skew	2/17/2017
TSA-SB-LT-RS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Right Skew	2/17/2017
TSA-SB-LT-ZS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Zero Skew	2/17/2017
TSA-SC-LT-LS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Left Skew	2/17/2017
TSA-SC-LT-RS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Right Skew	2/17/2017
TSA-SC-LT-ZS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Zero Skew	2/17/2017
TSB-SB-LT-LS	1 row of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Left Skew	2/17/2017
TSB-SB-LT-RS	1 row of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Right Skew	2/17/2017
TSB-SB-LT-ZS	1 row of reinf in top slab; 1 row of reinf in each sidewall; L-Type Wingwalls, Zero Skew	2/17/2017
TSB-SC-LT-LS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Left Skew	2/17/2017
TSB-SC-LT-RS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Right Skew	2/17/2017
TSB-SC-LT-ZS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; L-Type Wingwalls, Zero Skew	2/17/2017



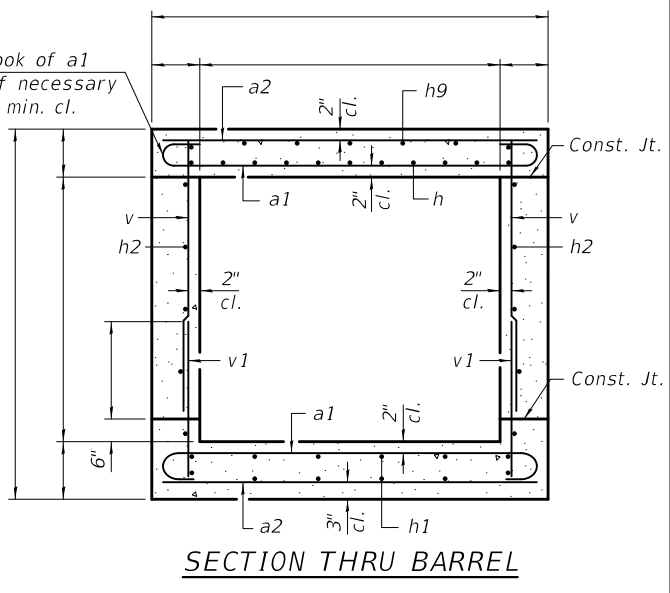
**LONGITUDINAL SECTION**  
(Dimensions at Rt. L's to C Roadway)



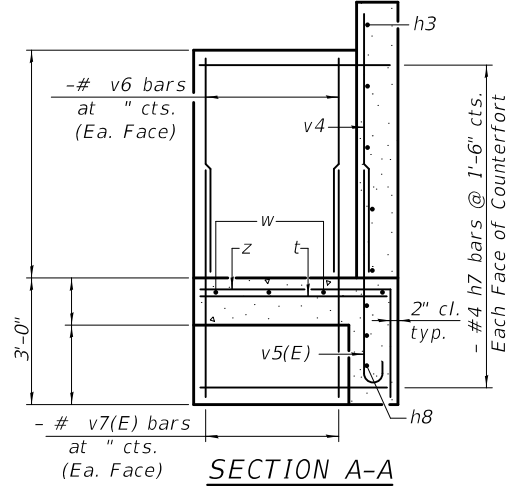
**PLAN**



**SECTION THRU HEADWALL**

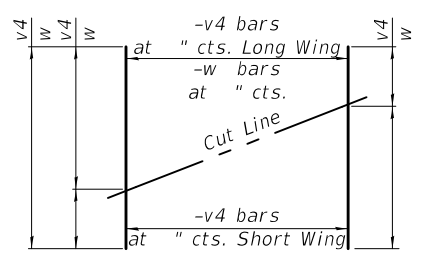


**SECTION THRU BARREL**



**SECTION A-A**

Showing long wing with counterfort.  
Omit counterfort at short wing.



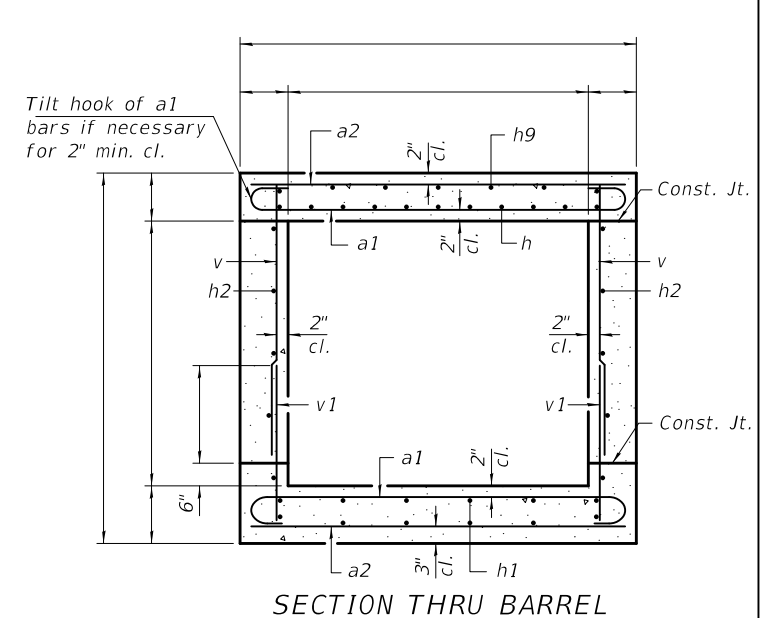
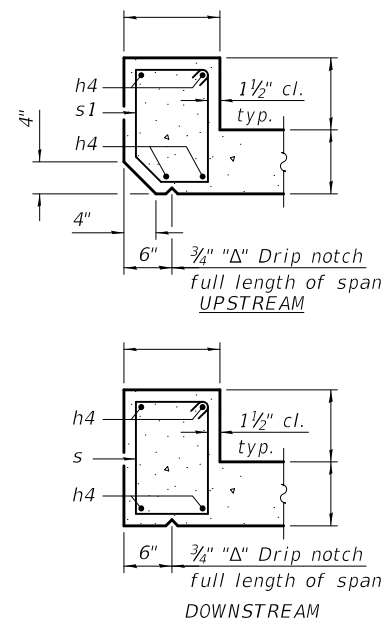
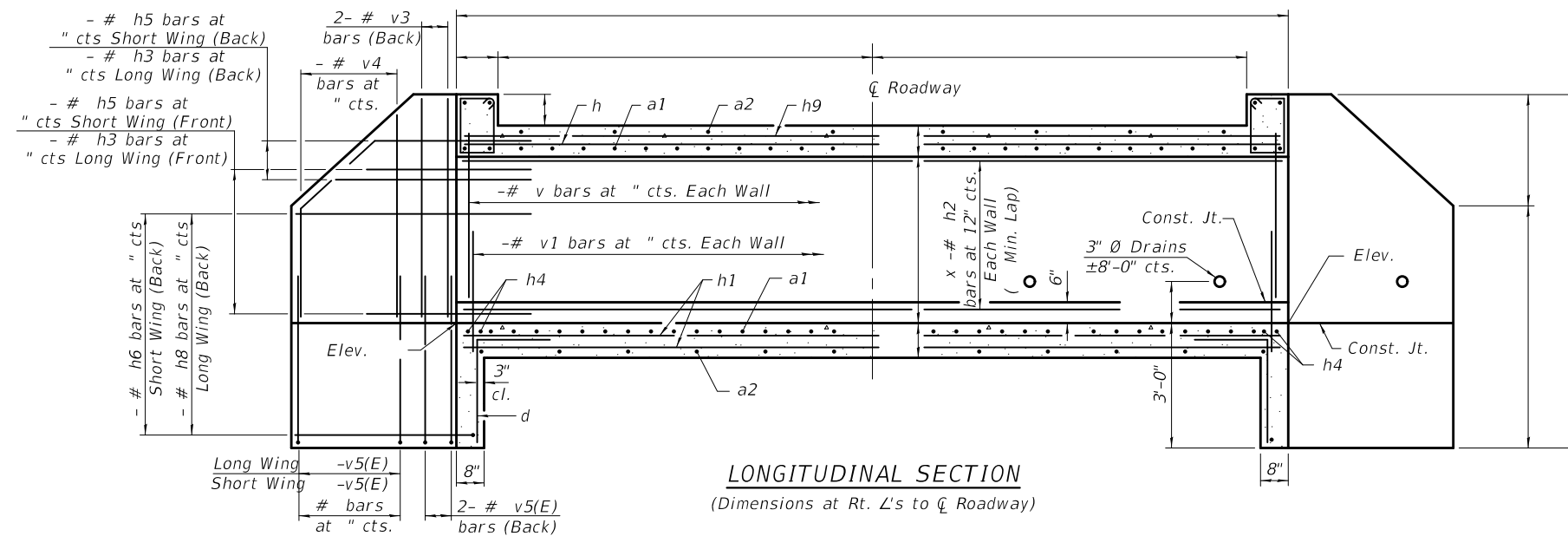
**FIELD CUTTING DIAGRAM**

Order bars shown full length. Cut as shown  
and use remainder of bars in opposite wingwall.



























BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	

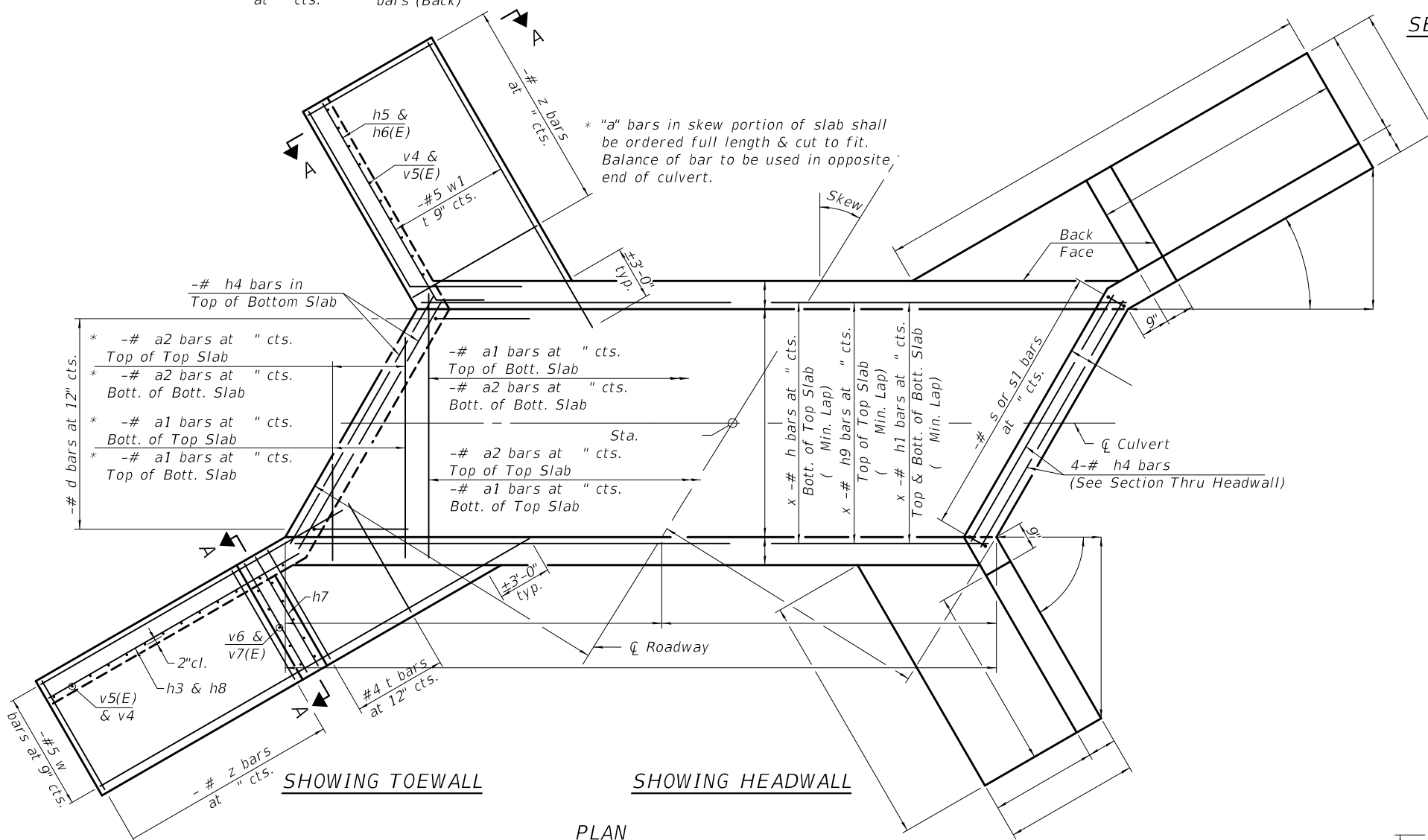
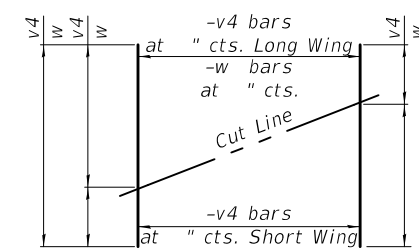
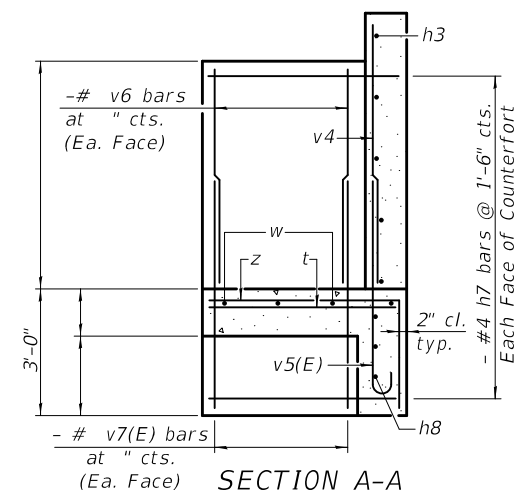
Notes:  
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
At the Contractor's option, a longer v1 bar may be ordered to replace the v bar.  
No reduction in quantities shall be made for this substitution.

TSA-SB-LT-LS 2-17-2017



### BILL OF MATERIAL

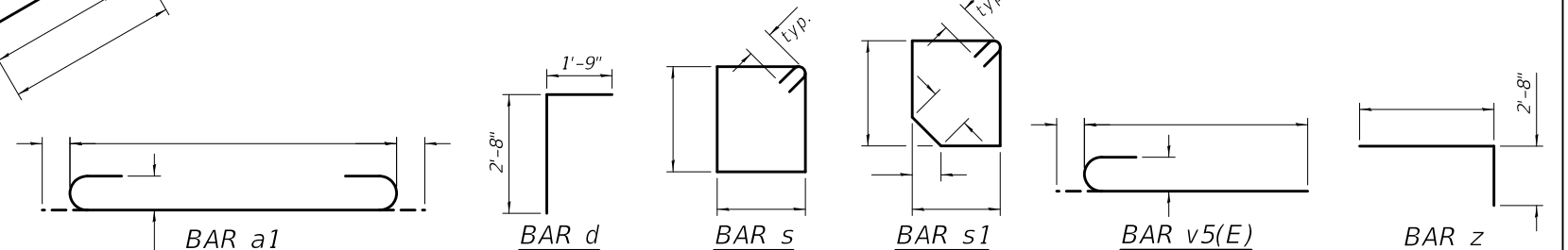
Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	

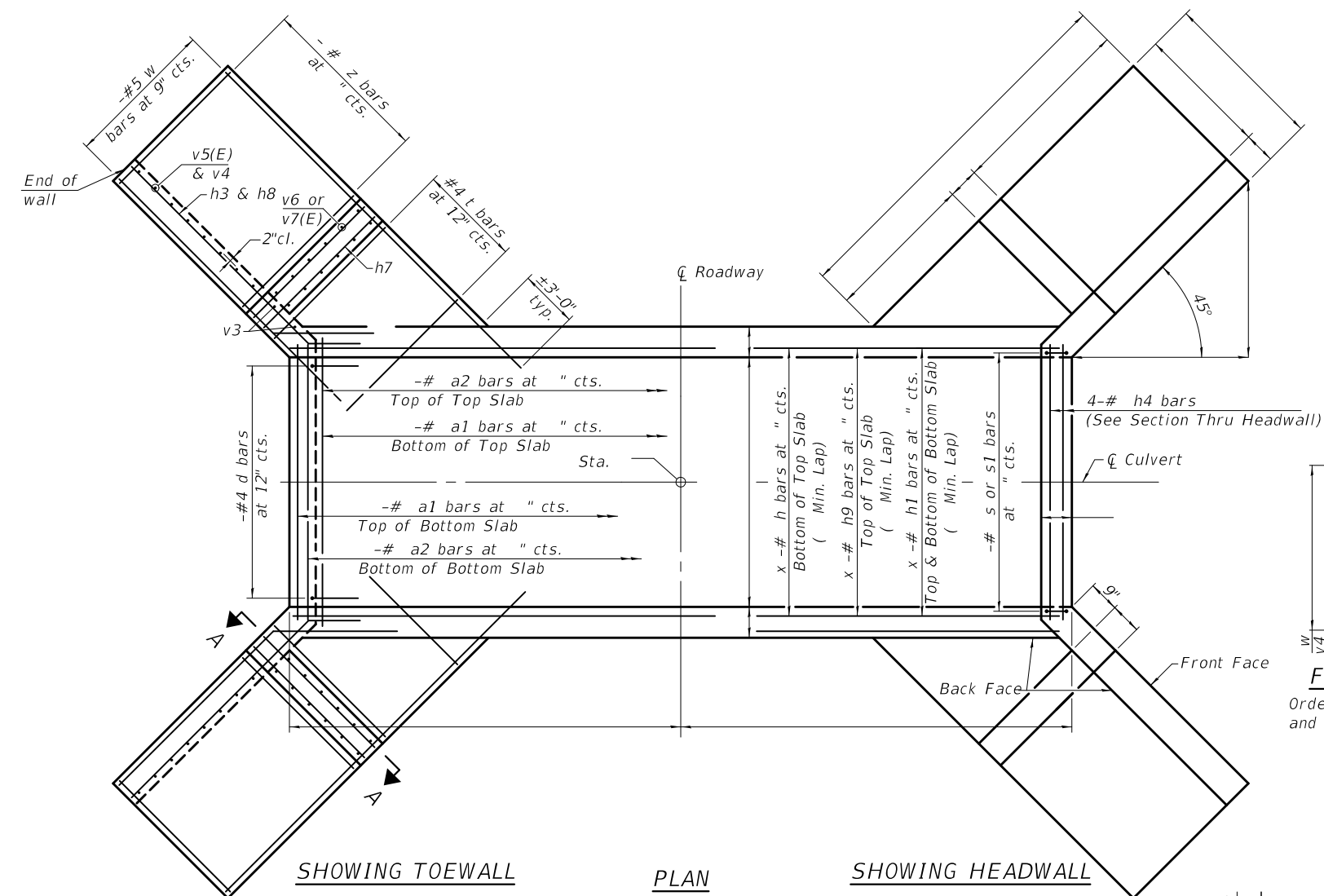
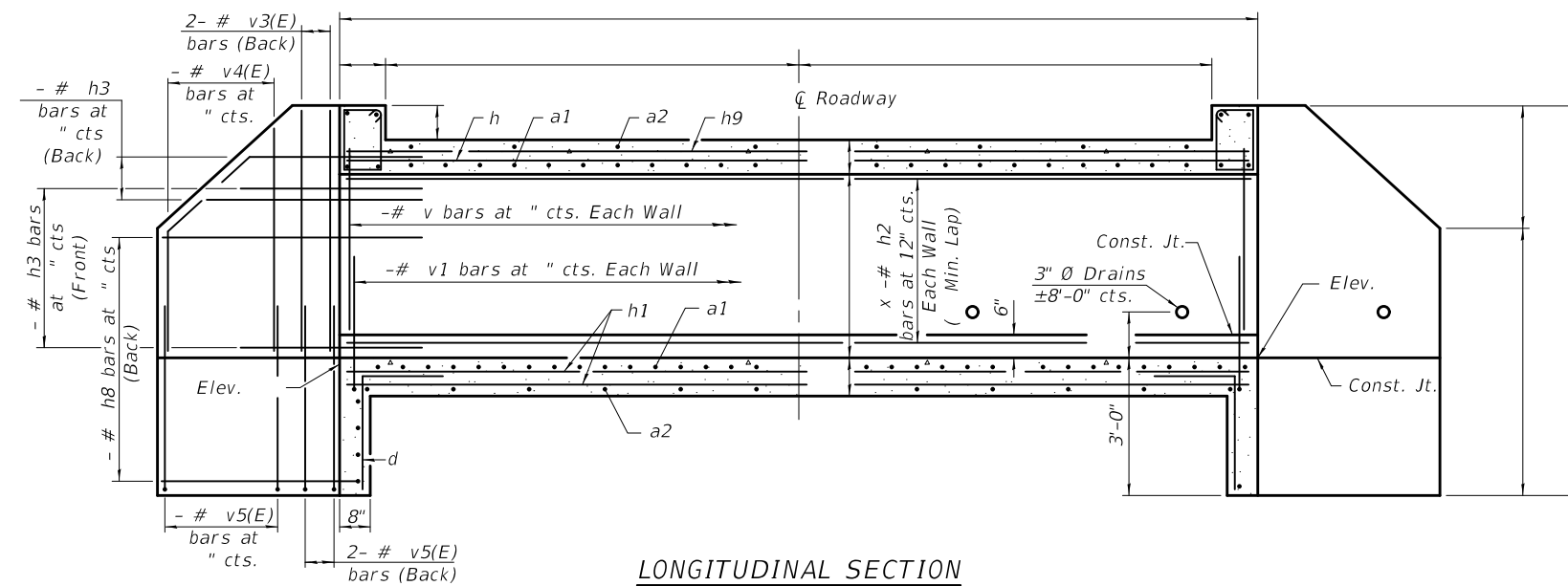


Notes:

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

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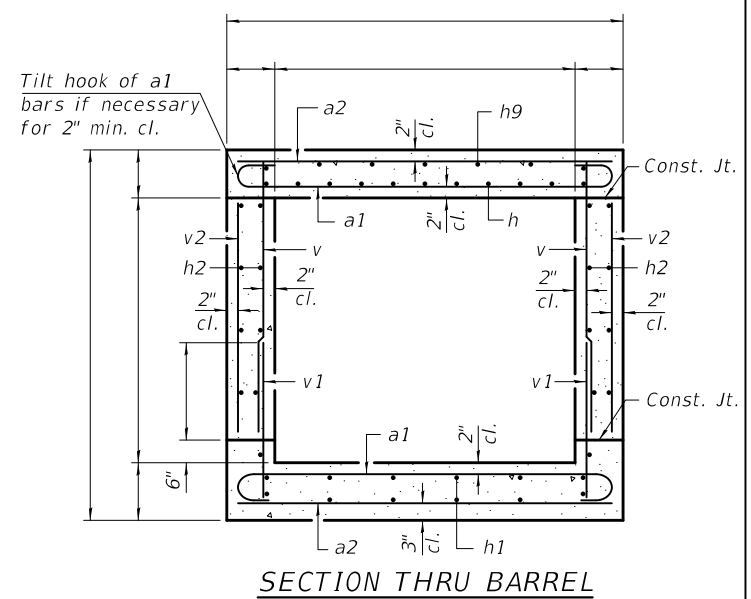
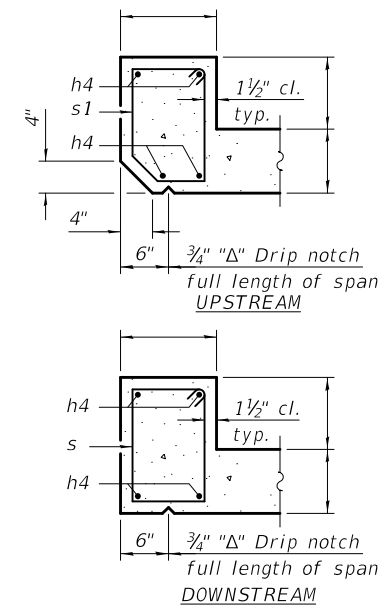
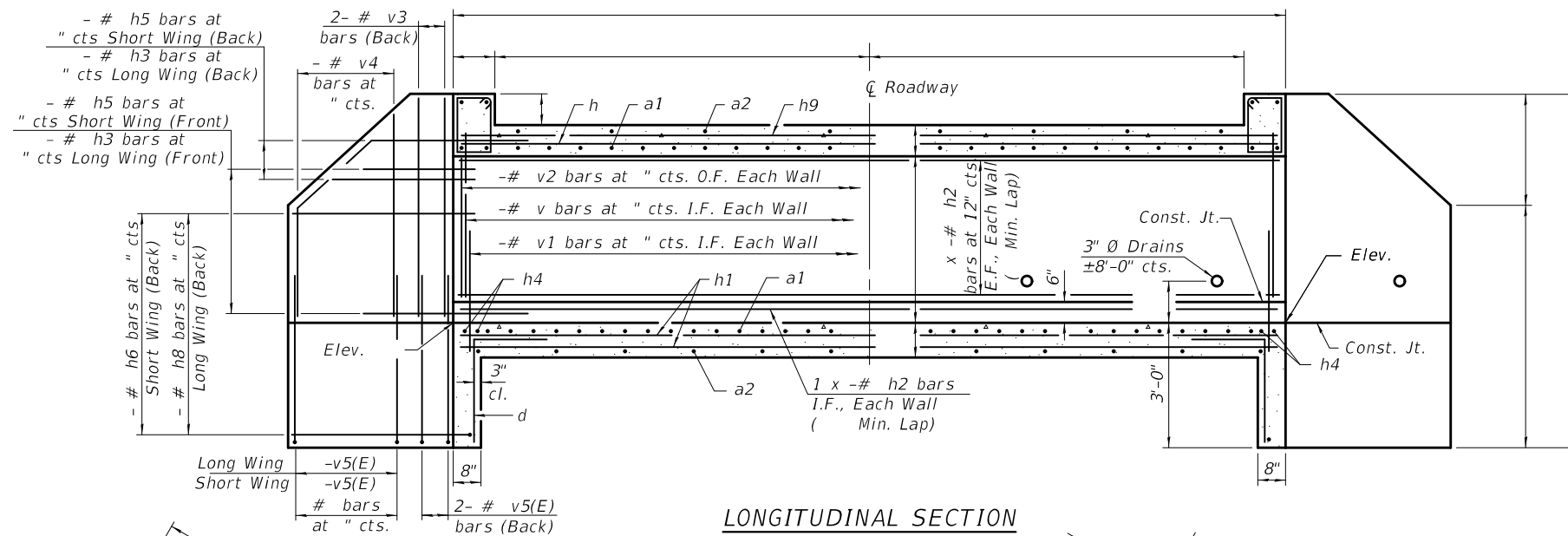


Notes:  
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

























*TSA-SB-LT-ZS*

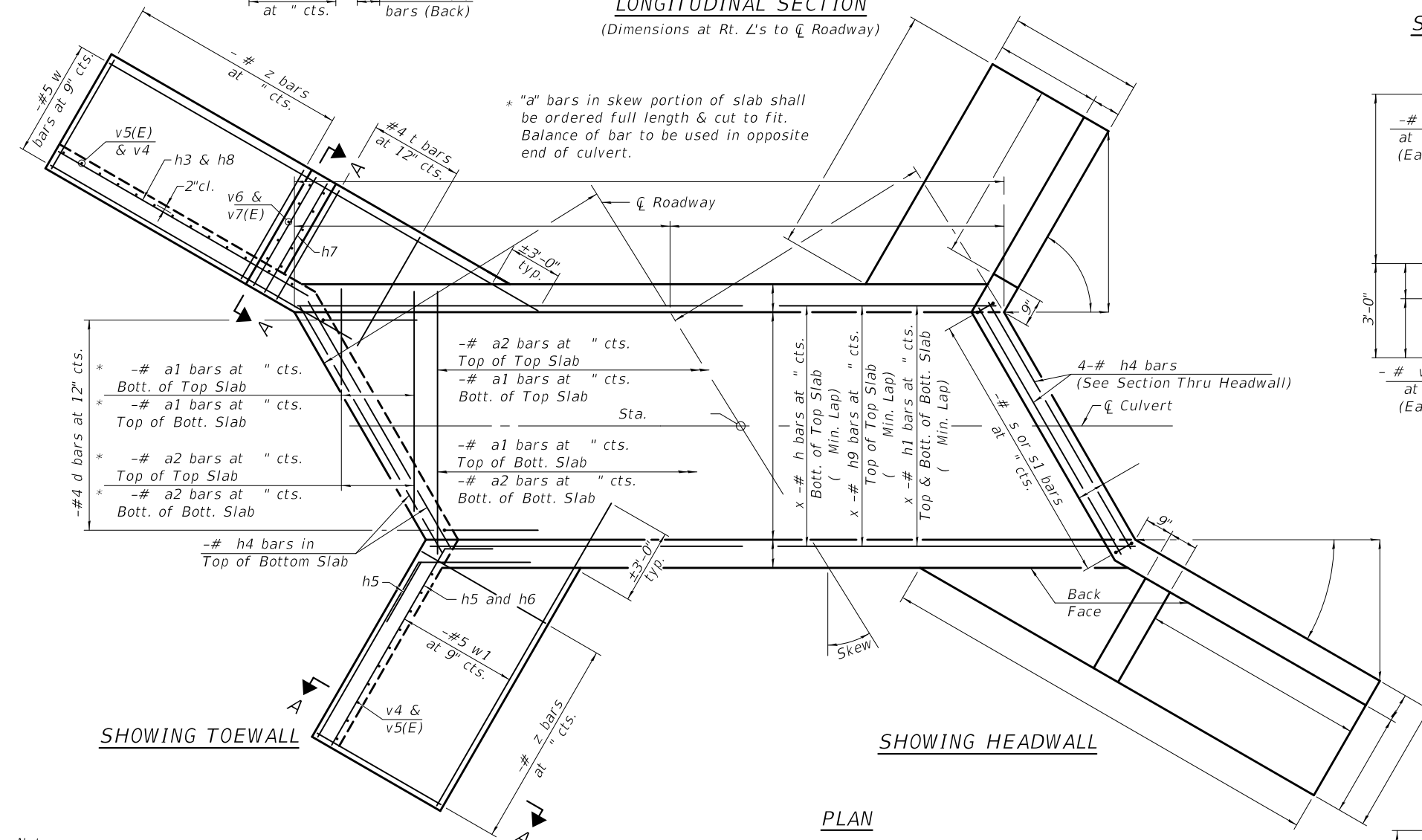
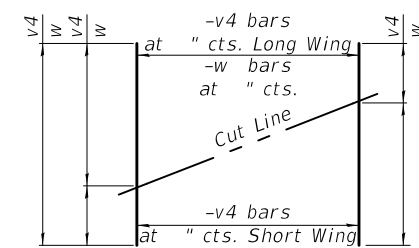
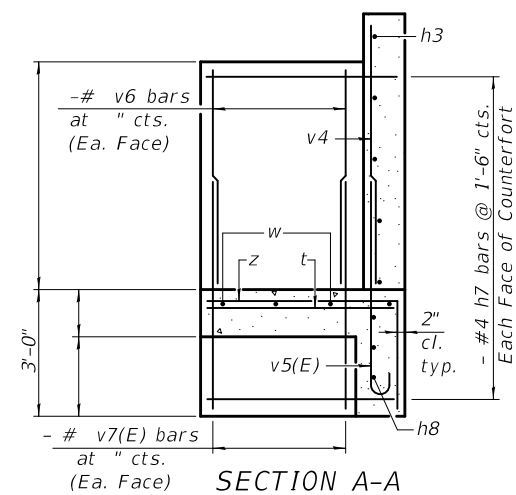
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -							
	PLOT DATE =	CHECKED -	REVISED -							
						CONTRACT NO.				
					ILLINOIS FED. AID PROJECT					



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

*At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.*

*TSA-SC-LT-LS*

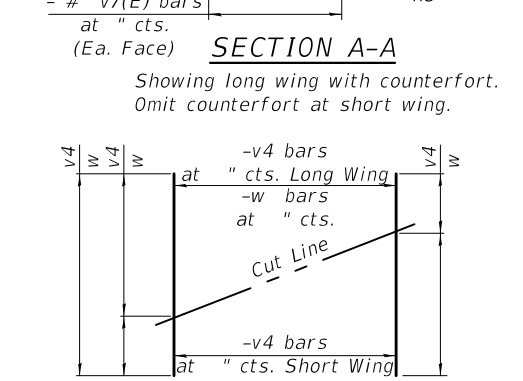
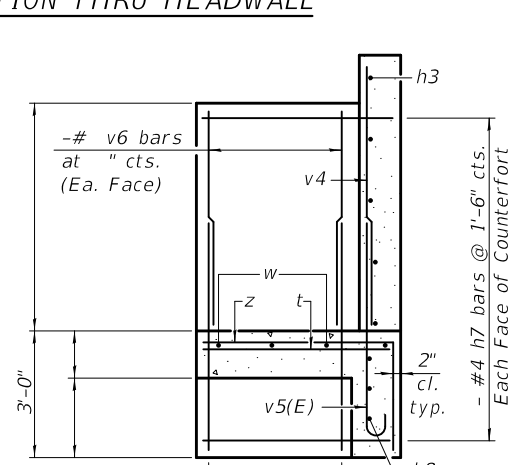
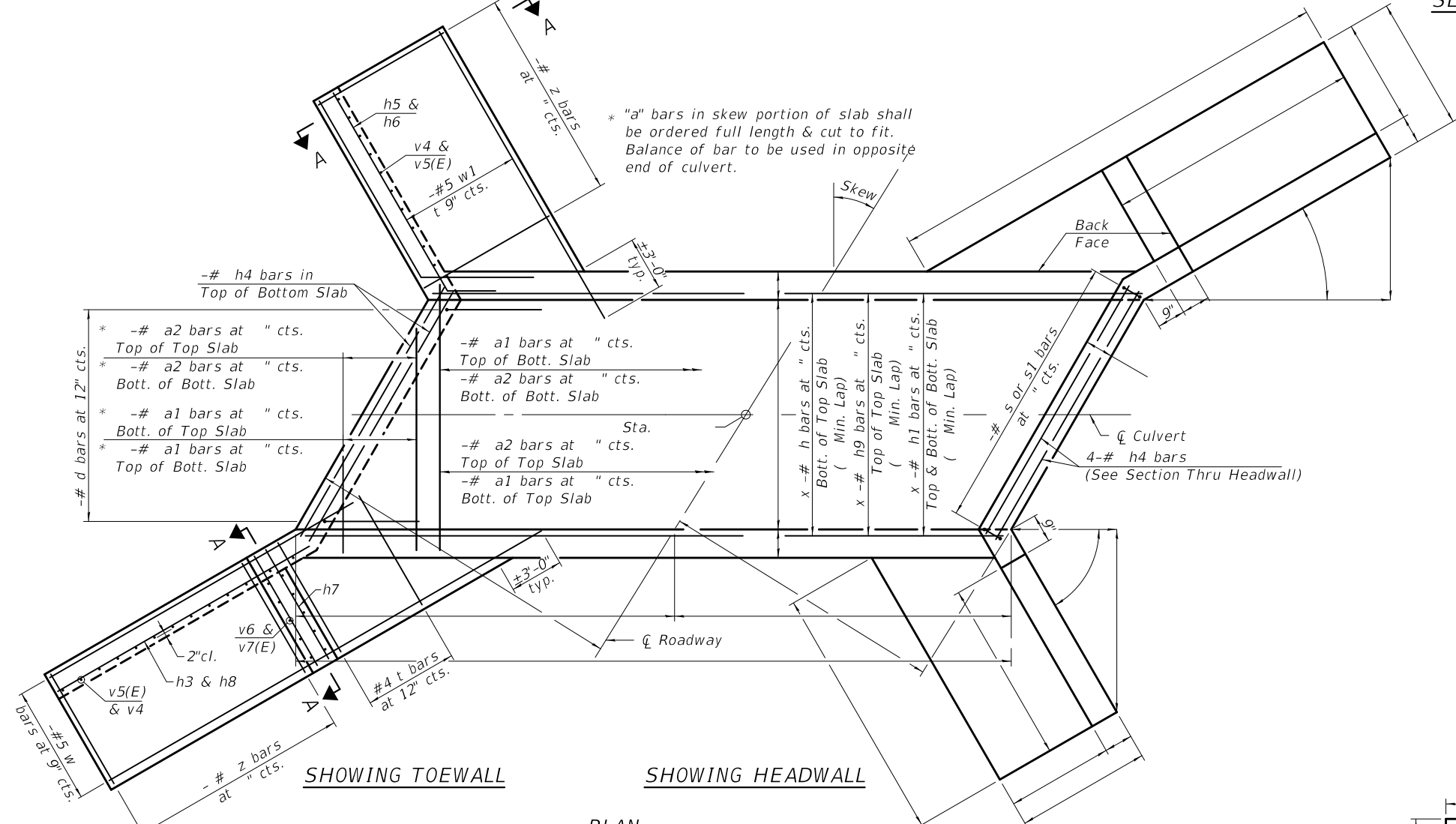
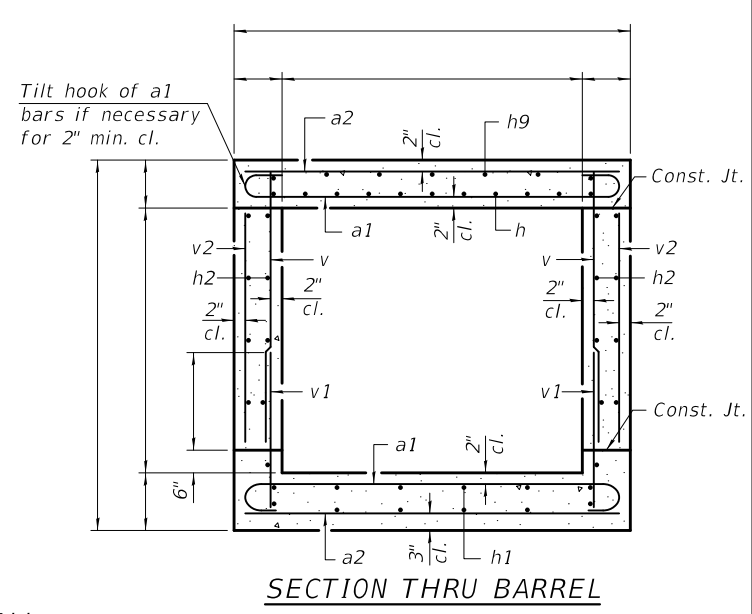
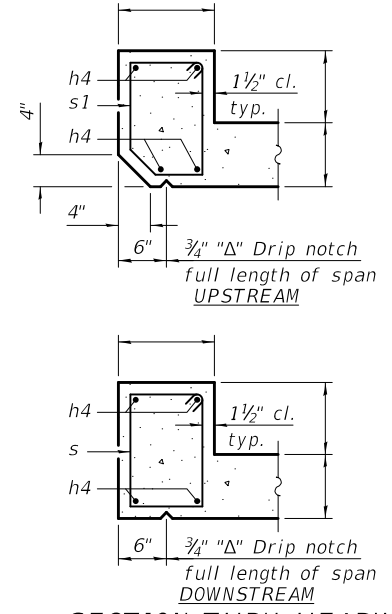
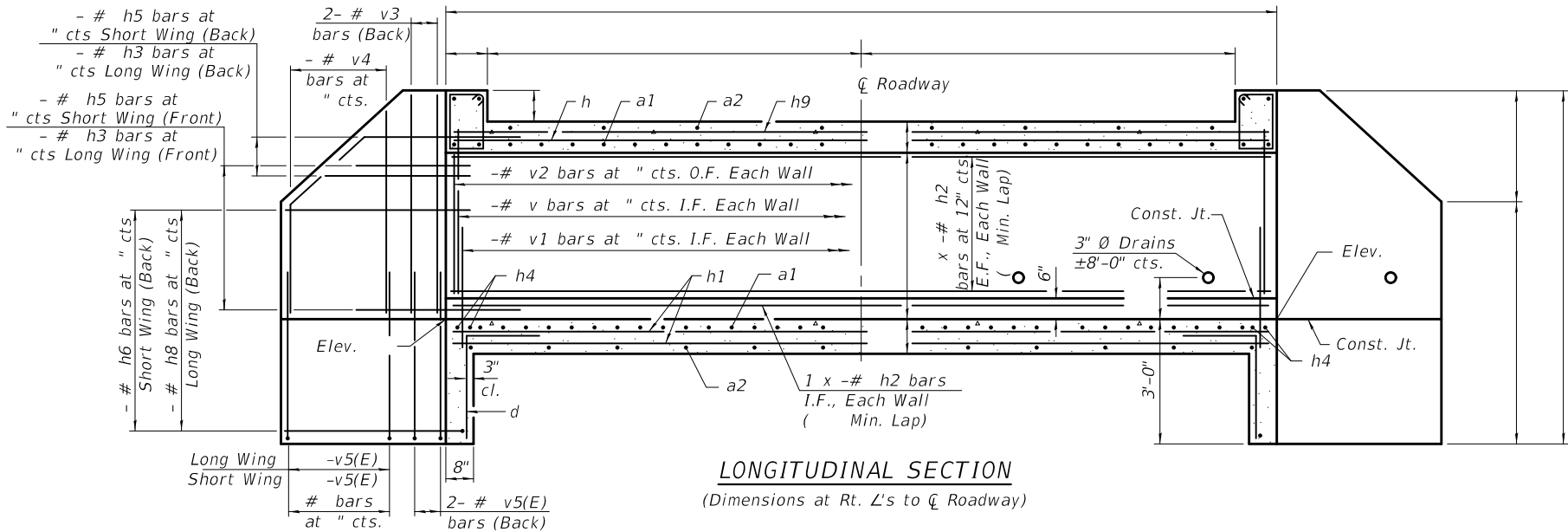
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS**  
**STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

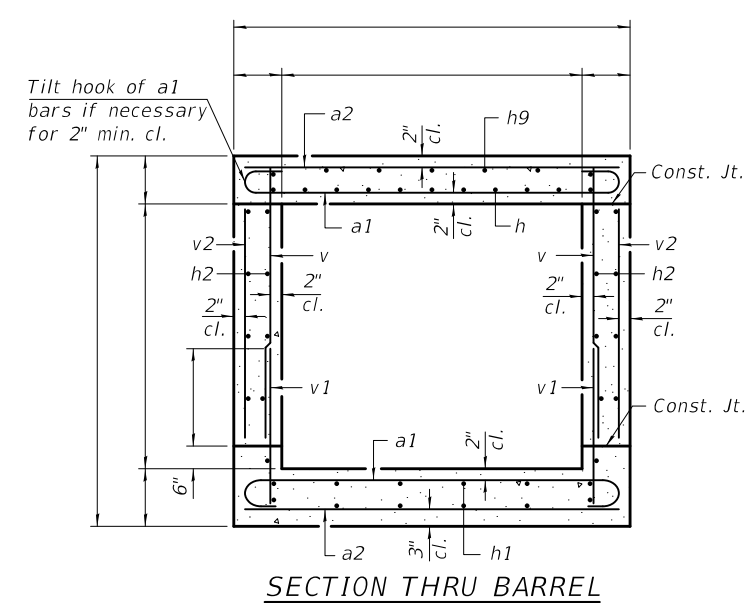
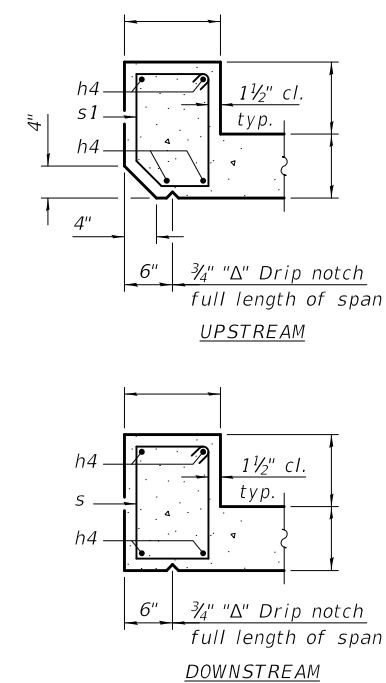
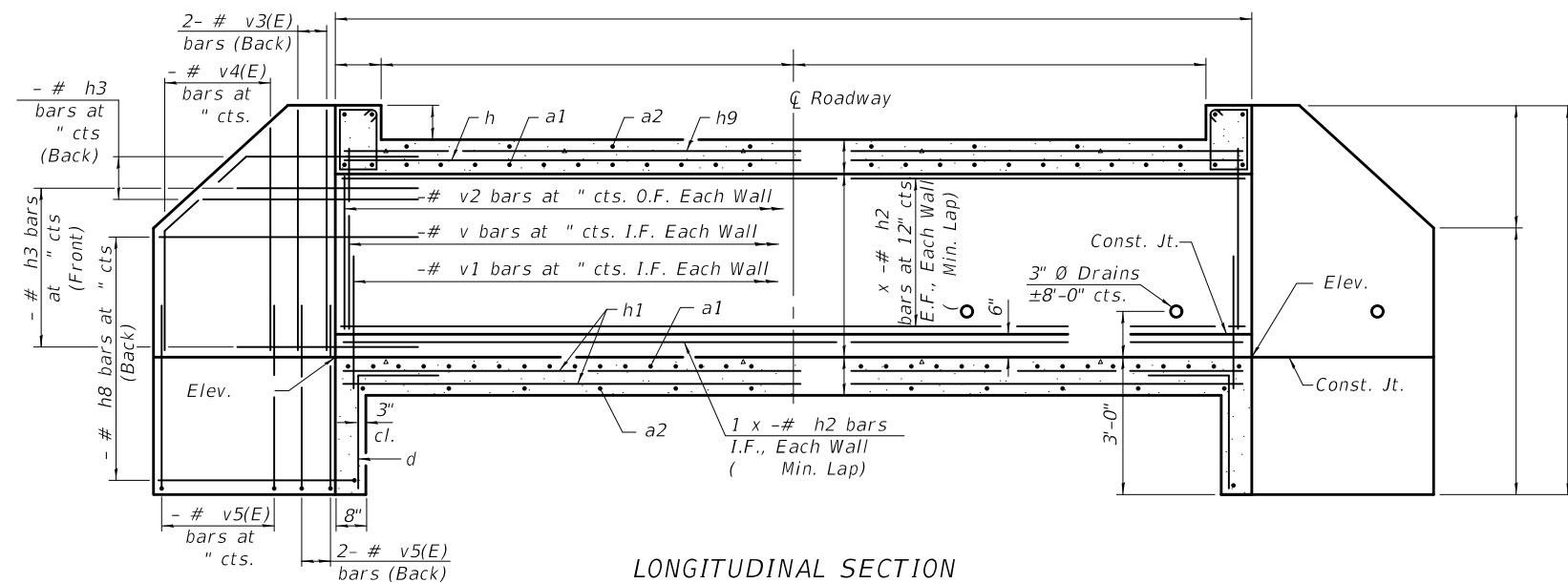


**BILL OF MATERIAL**























Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	

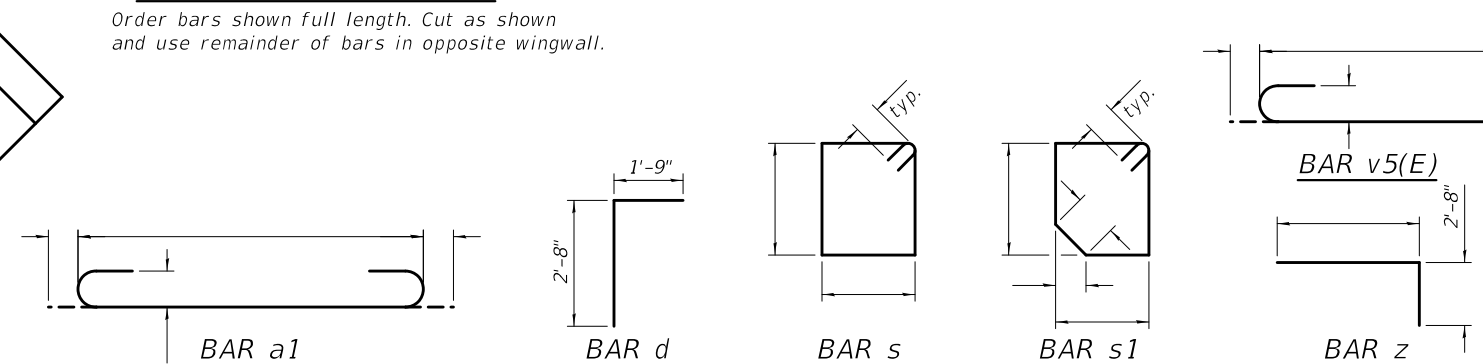
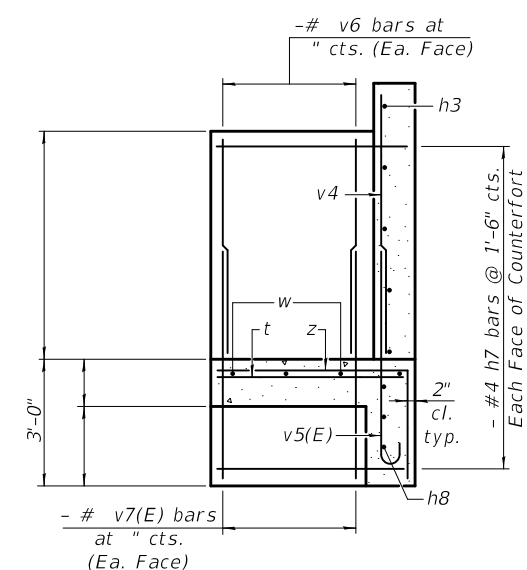
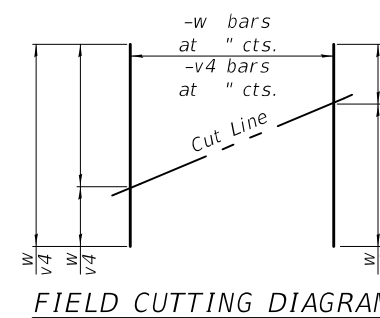
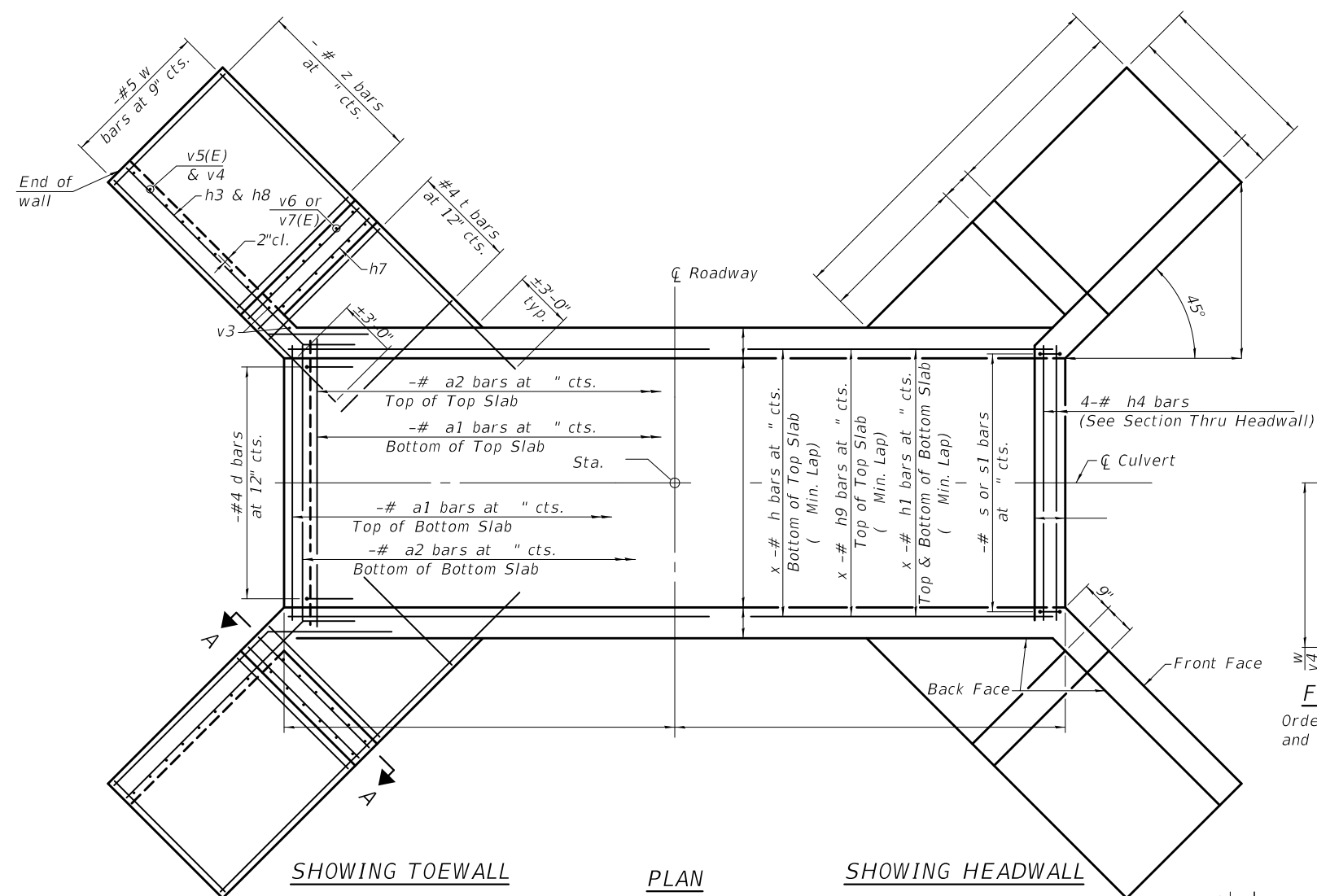
Notes:  
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
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TSA-SC-LT-RS 2-17-2017



### BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h7		#4		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:

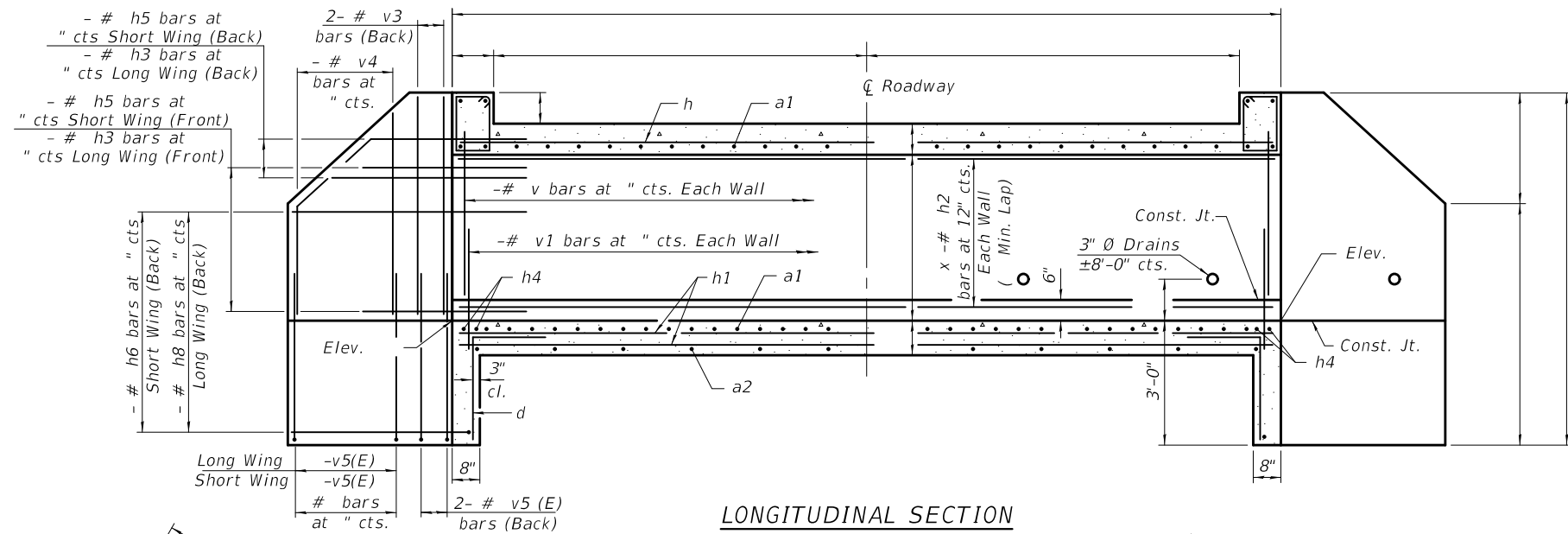
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.

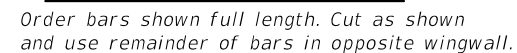
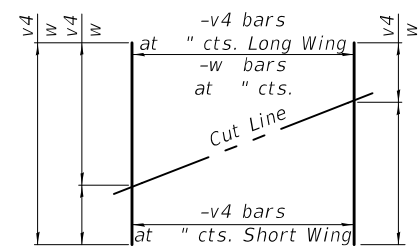
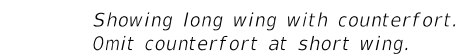
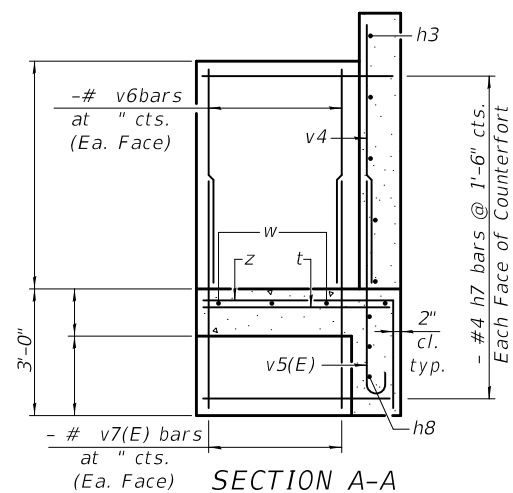
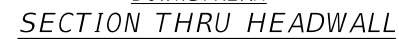
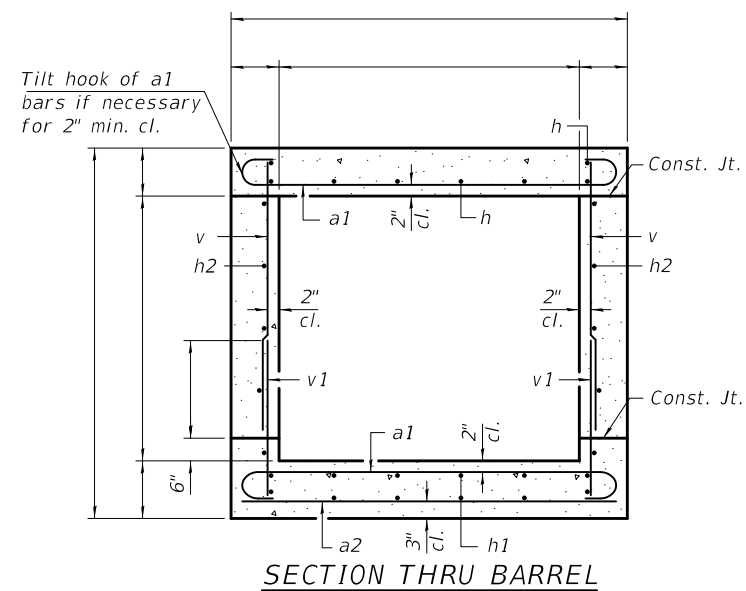
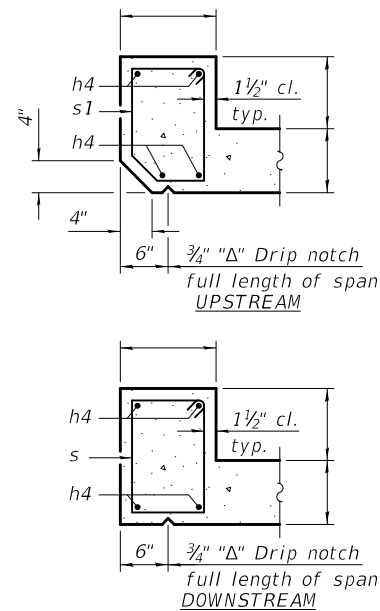
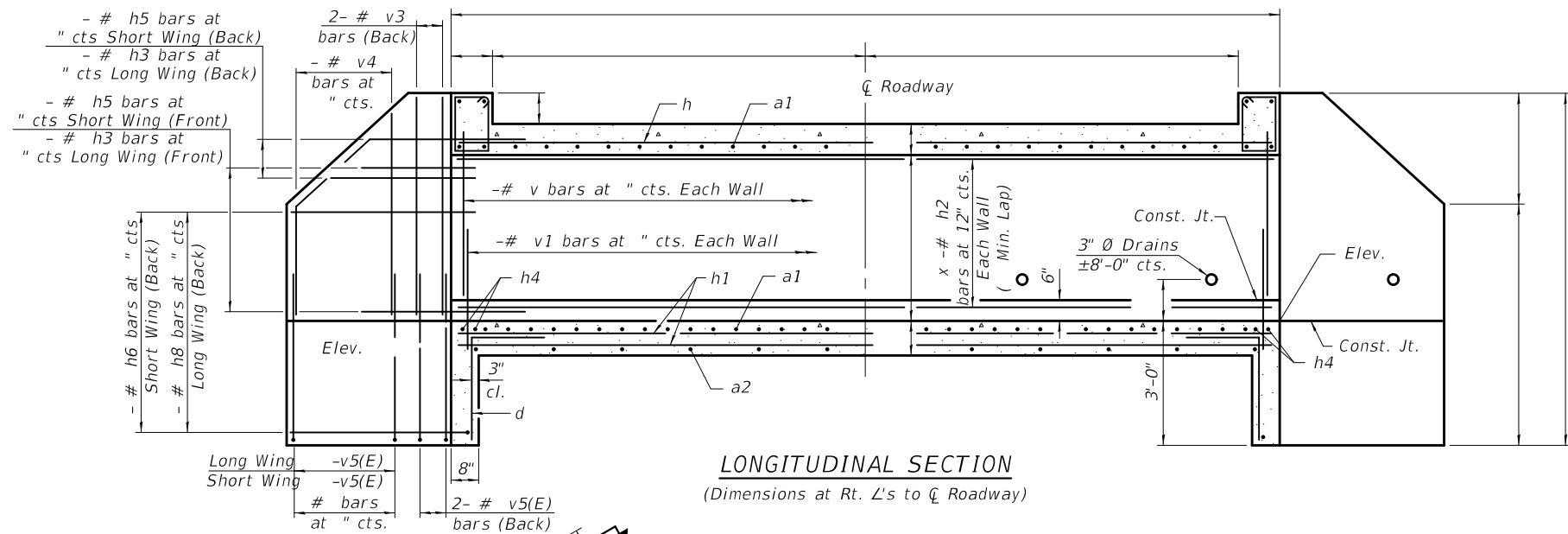
TSA-SC-LT-ZS

2-17-2017



























FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -			CONTRACT NO.				
	PLOT DATE =	CHECKED -	REVISED -			ILLINOIS FED. AID PROJECT				

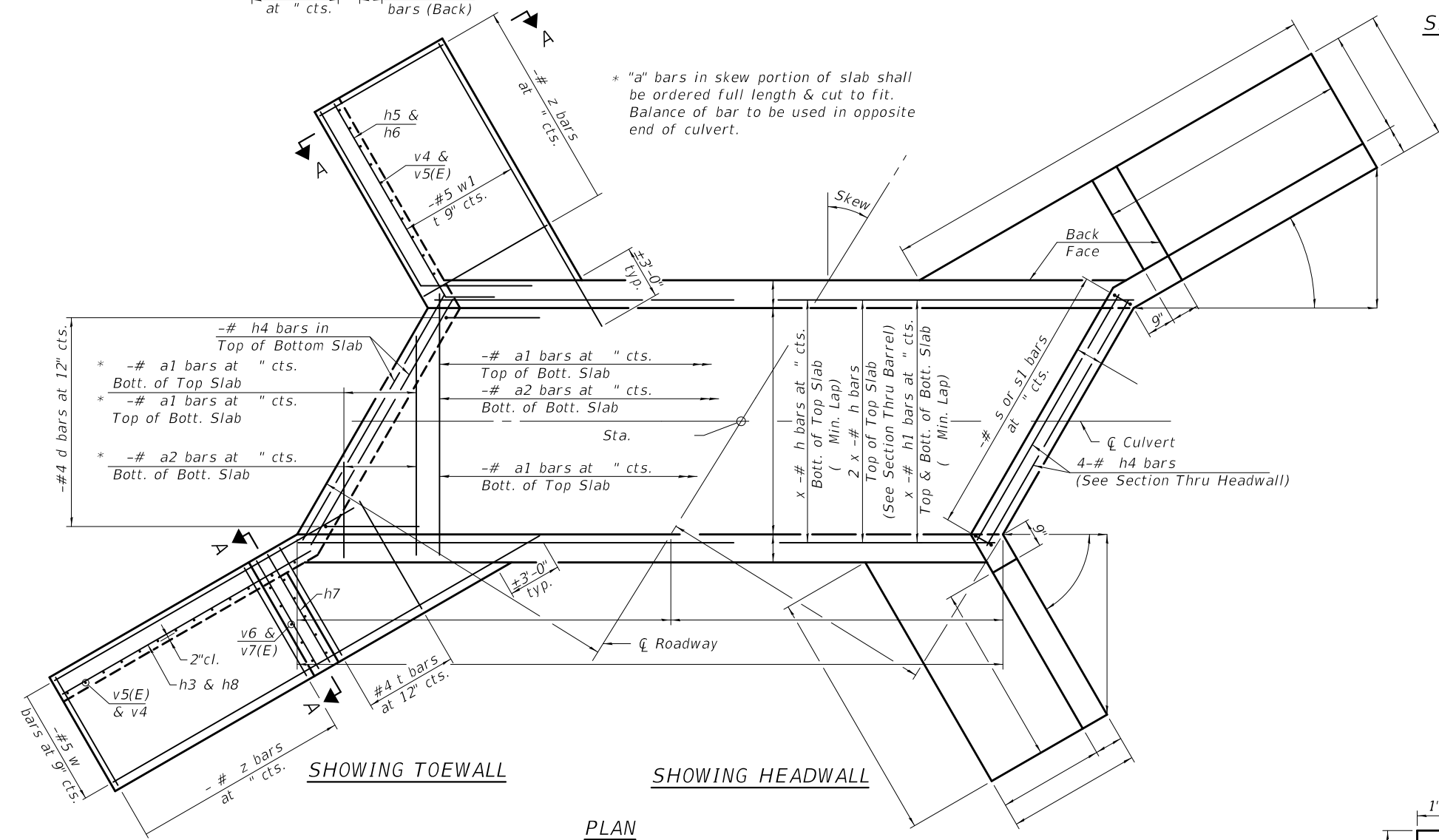






## BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

*At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.*

*TSB-SB-LT-RS*

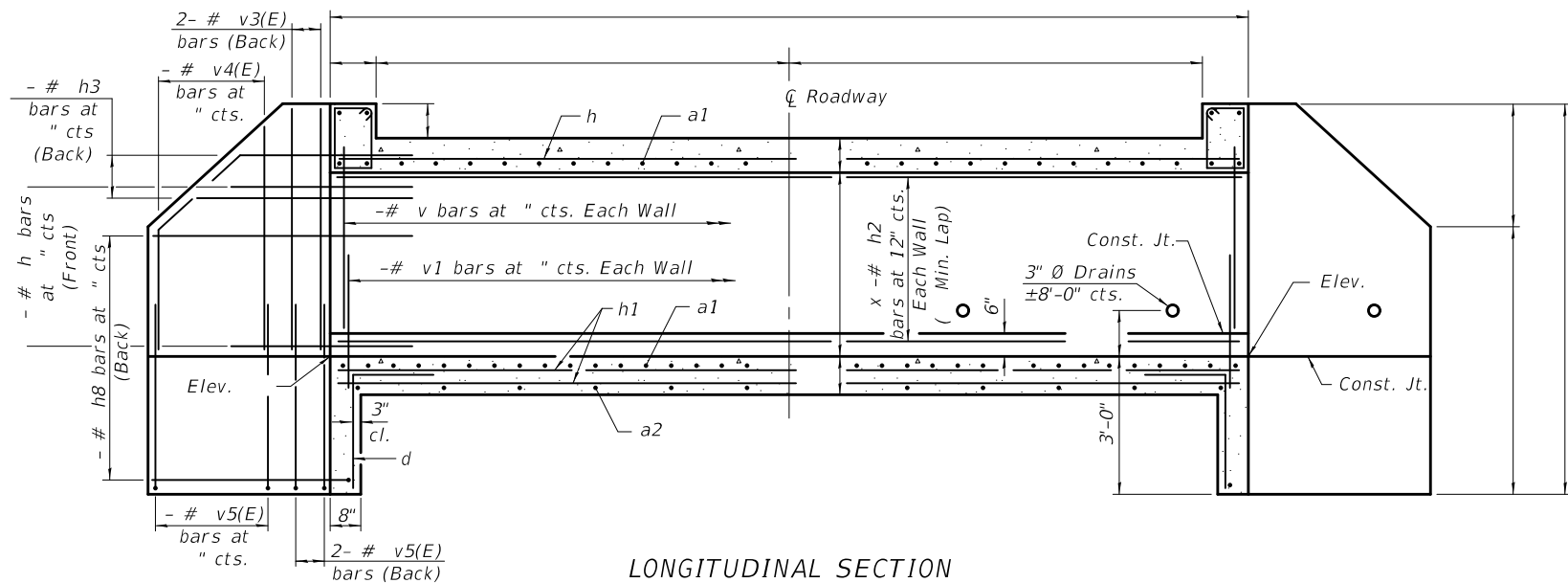
2-17-2017

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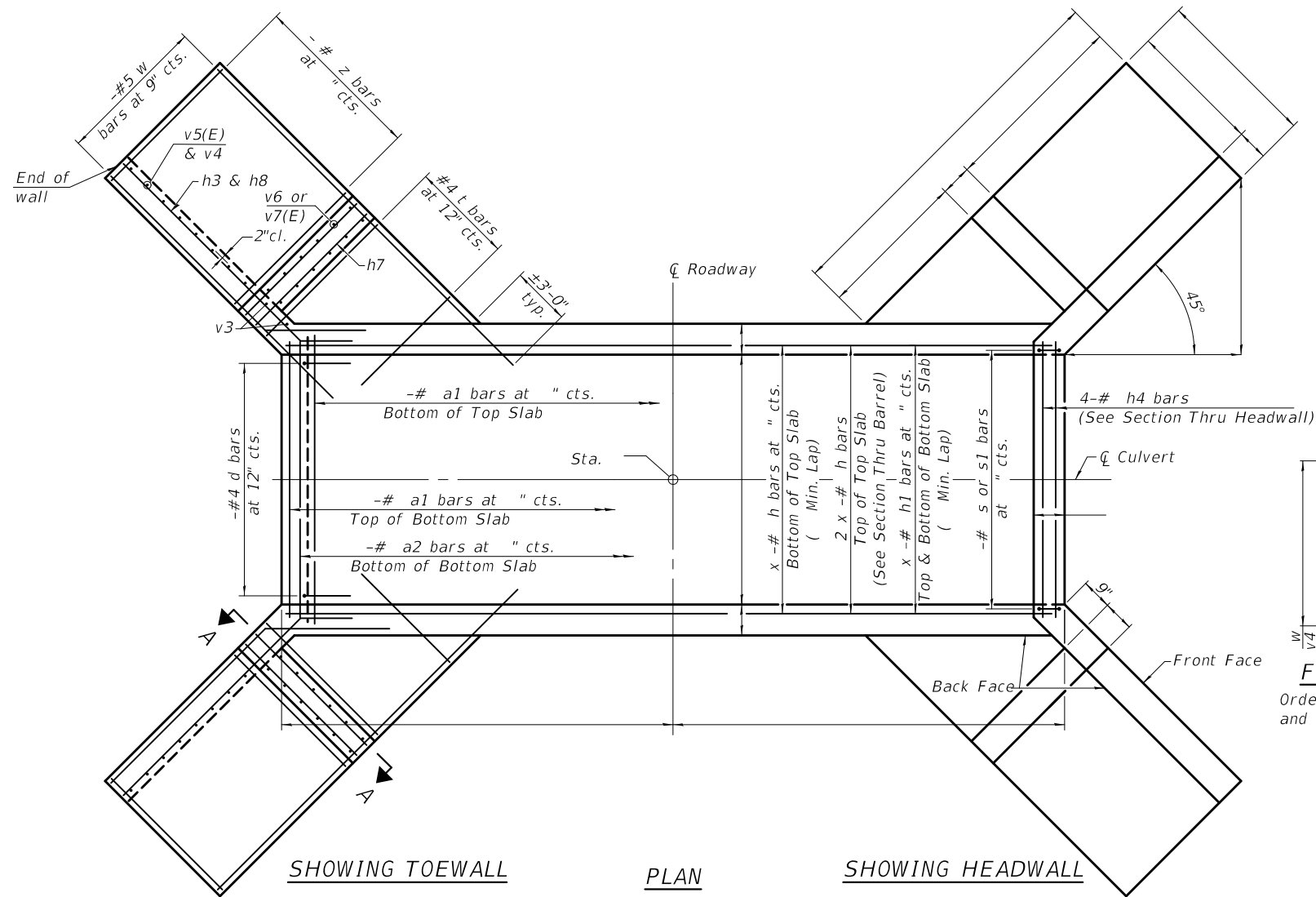
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS**  
**STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



LONGITUDINAL SECTION



SHOWING TOEWALL

PLAN

SHOWING HEADWALL

Notes:  
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
 At the Contractor's option, a longer v1 bar may be ordered to replace the v bar.  
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TSB-SB-LT-ZS

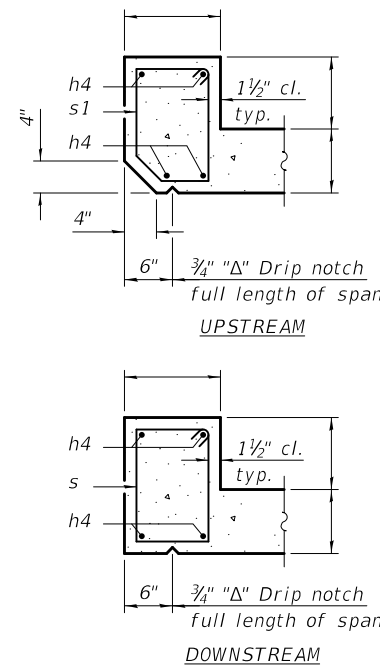
2-17-2017

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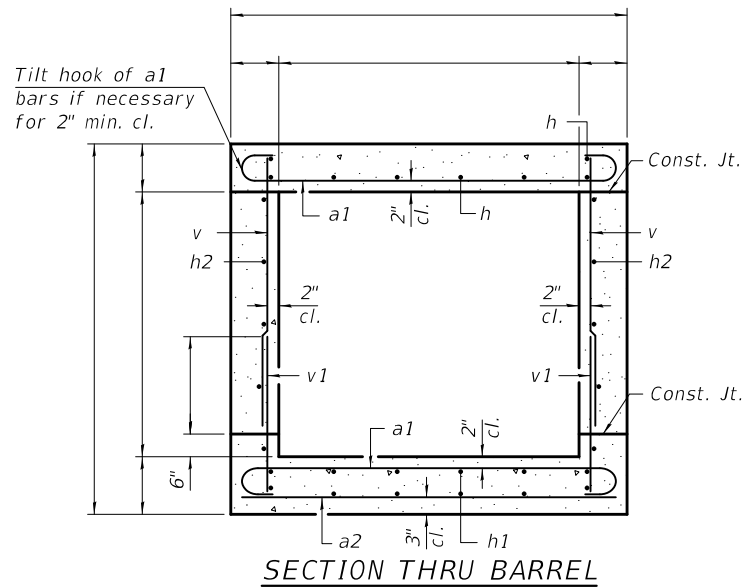
STATE OF ILLINOIS  
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CULVERT DETAILS  
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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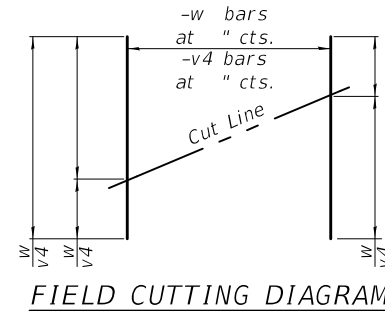
SECTION THRU HEADWALL



SECTION THRU BARREL

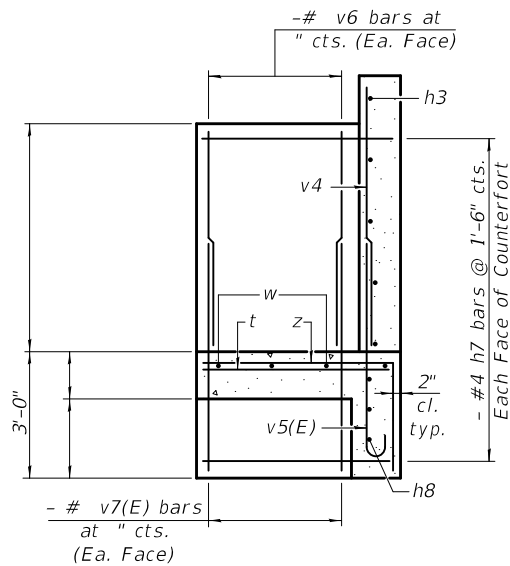
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h7		#4		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	

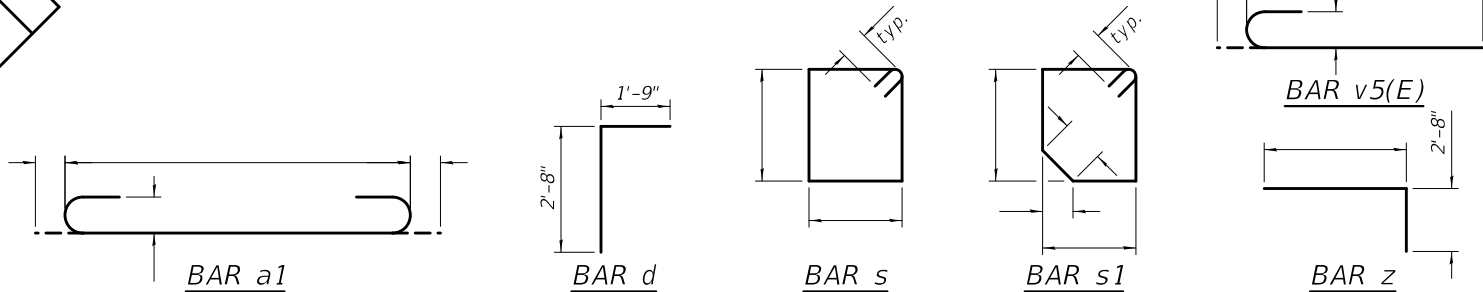


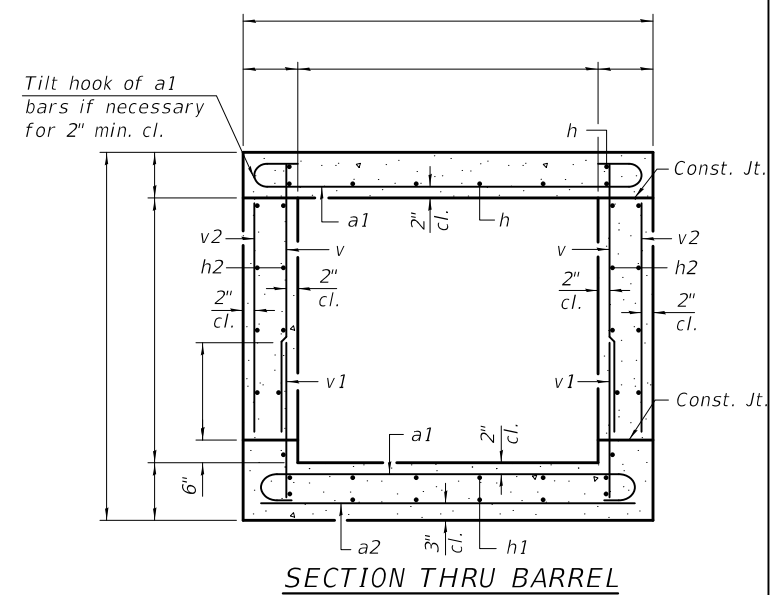
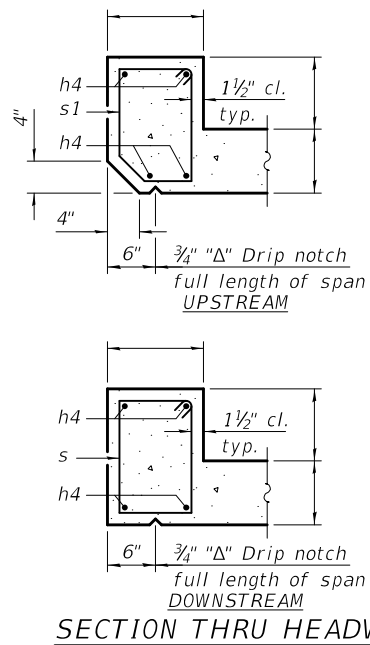
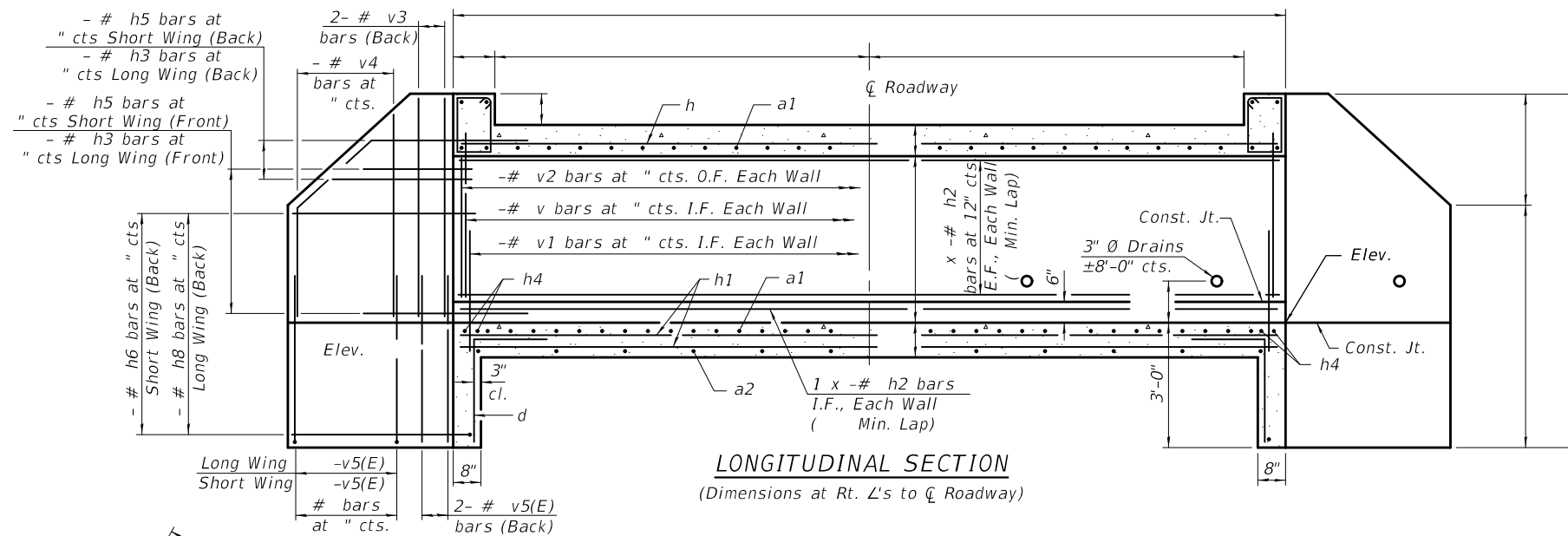
FIELD CUTTING DIAGRAM

Order bars shown full length. Cut as shown and use remainder of bars in opposite wingwall.





























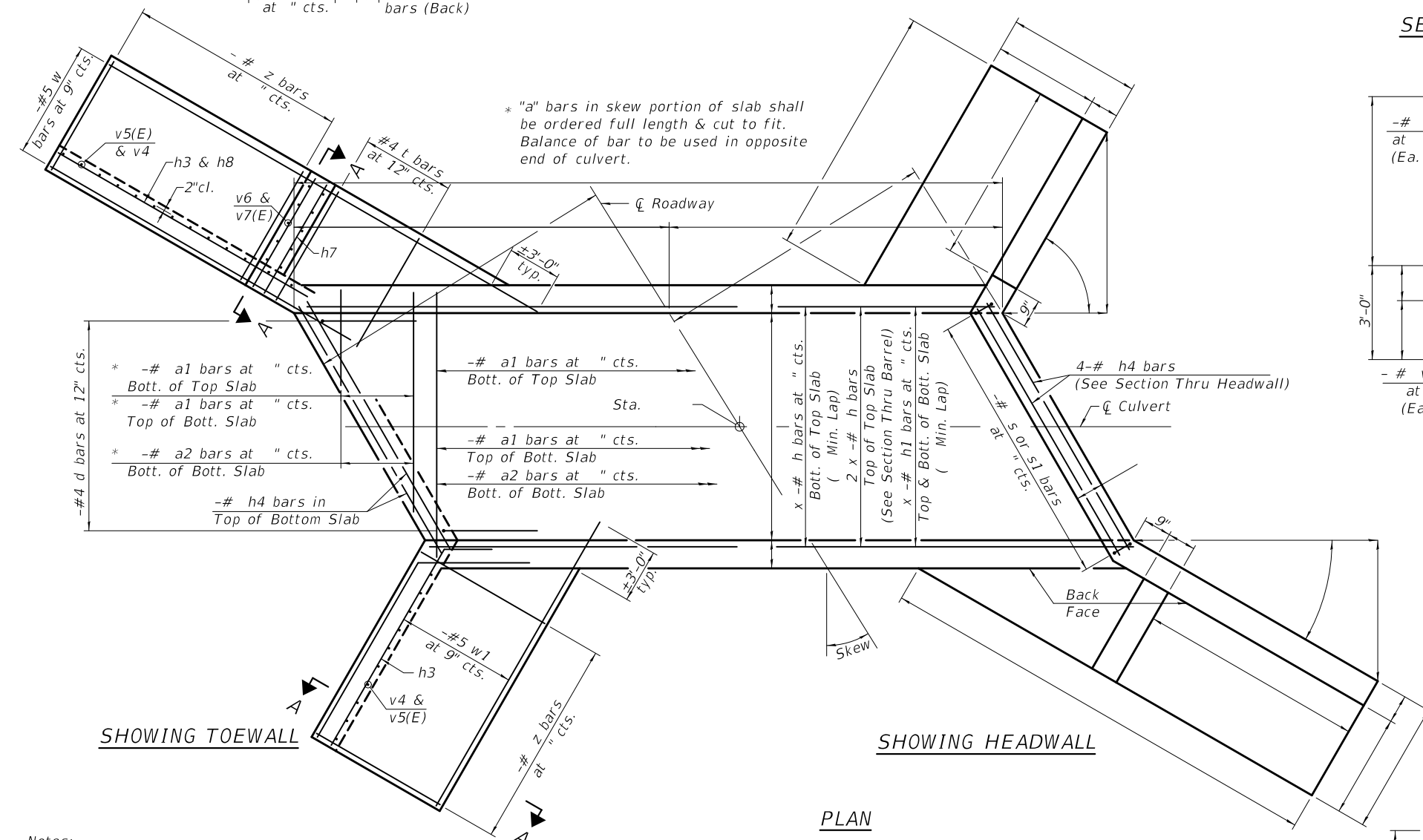
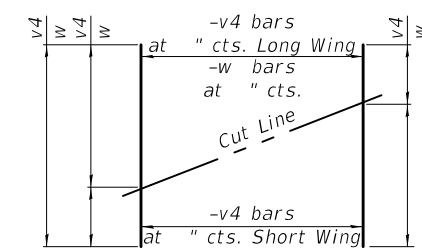
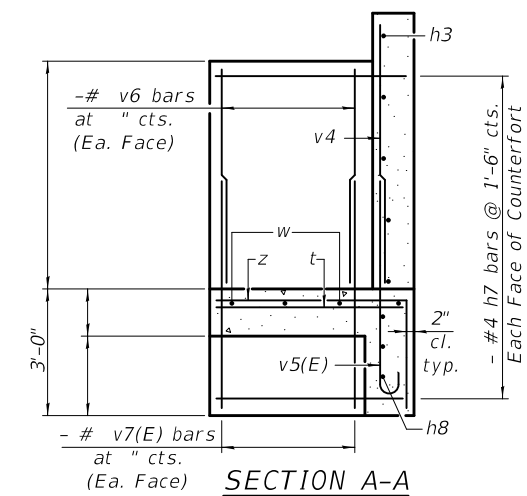
SECTION A-A





BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

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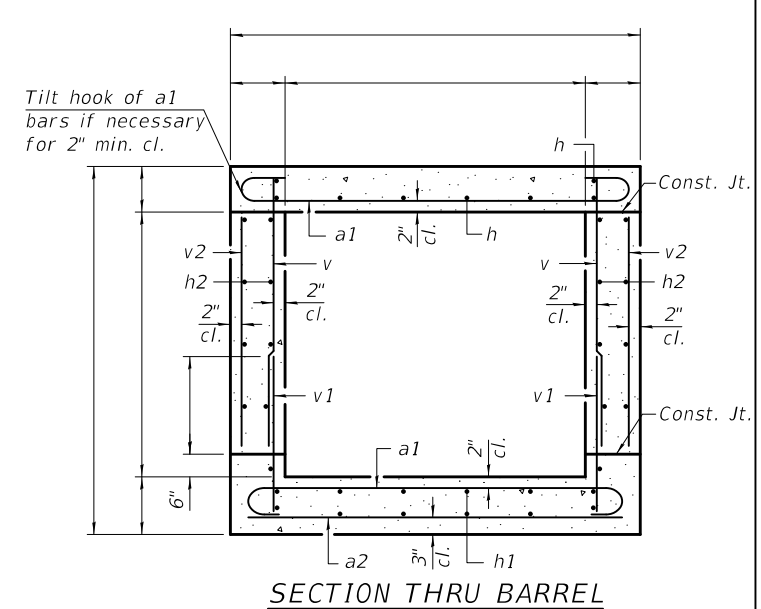
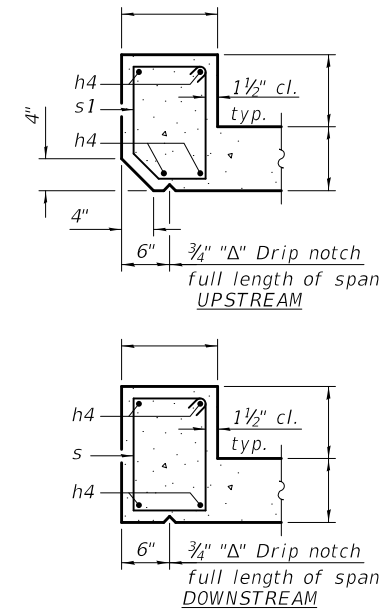
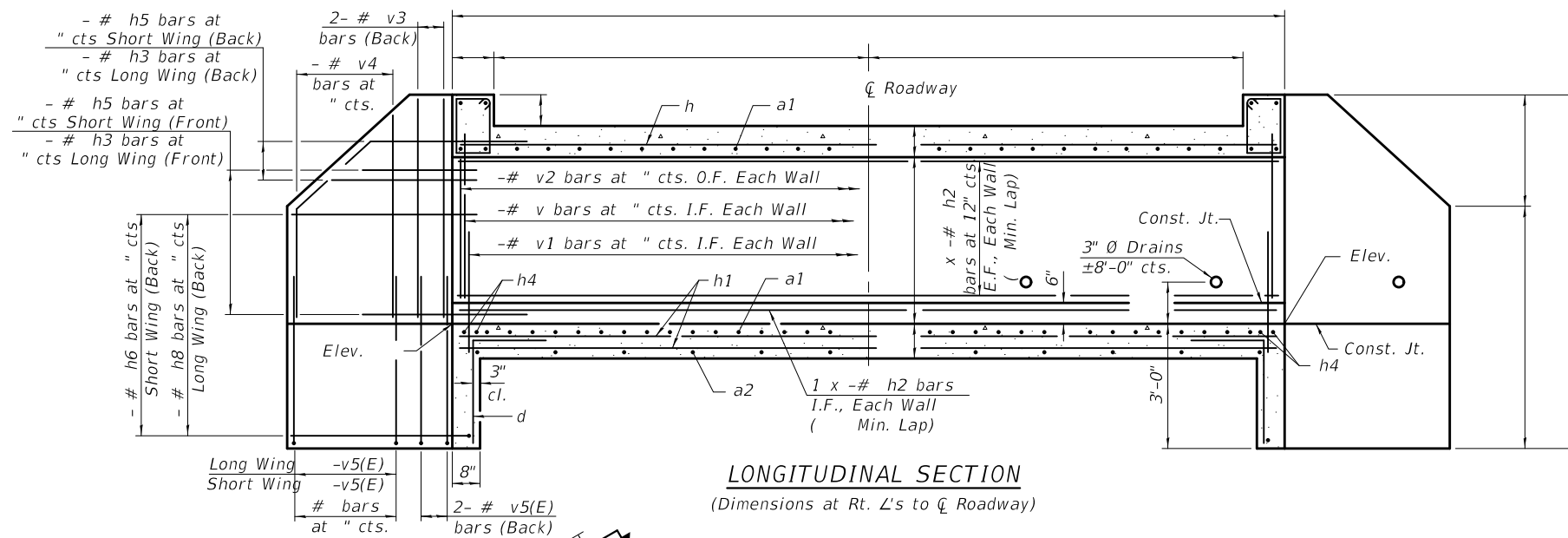
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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






















**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

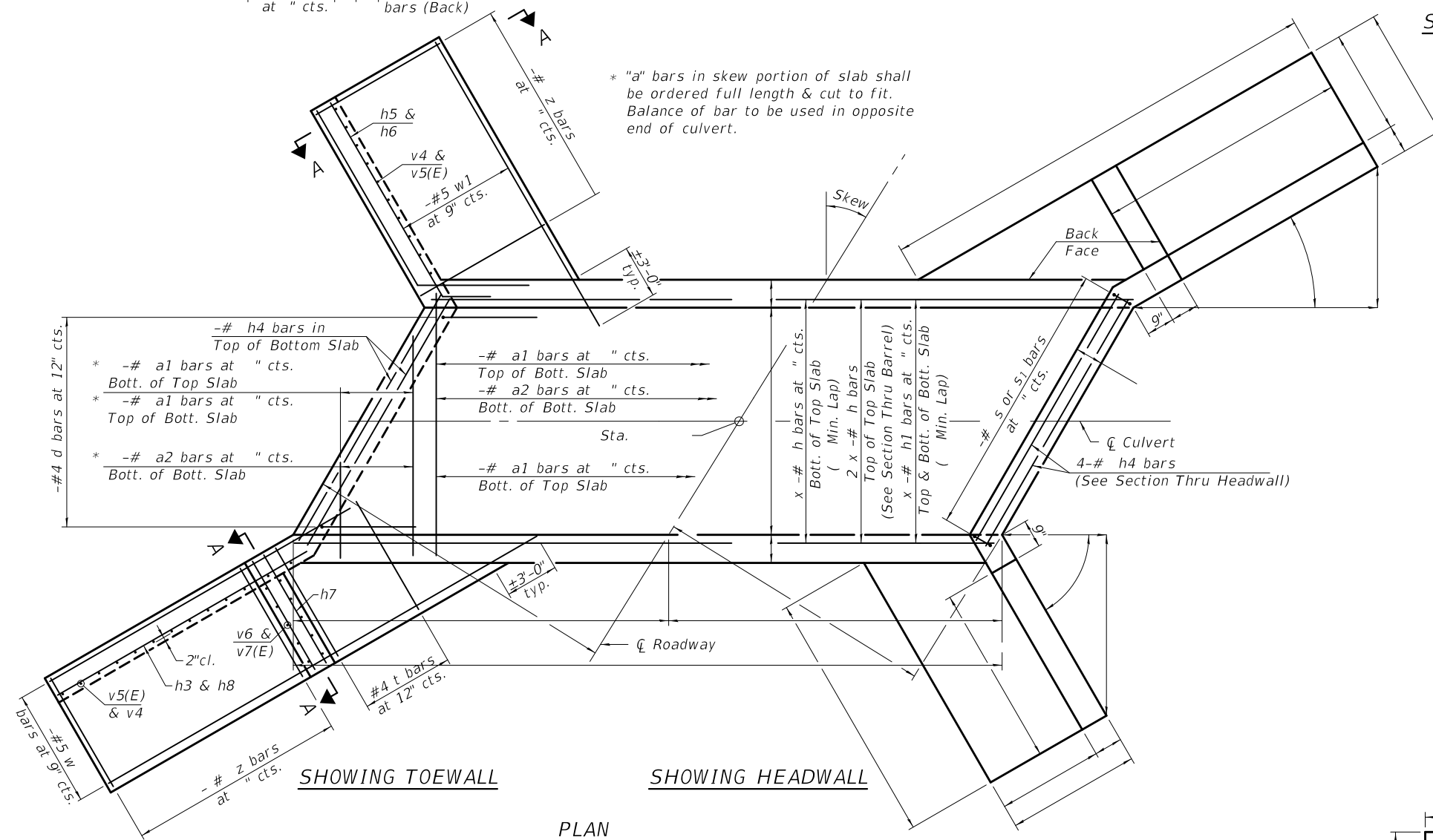
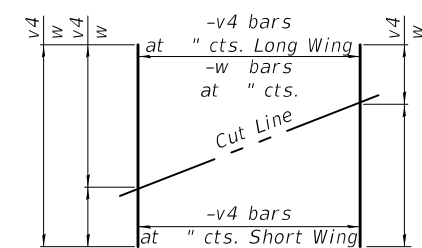
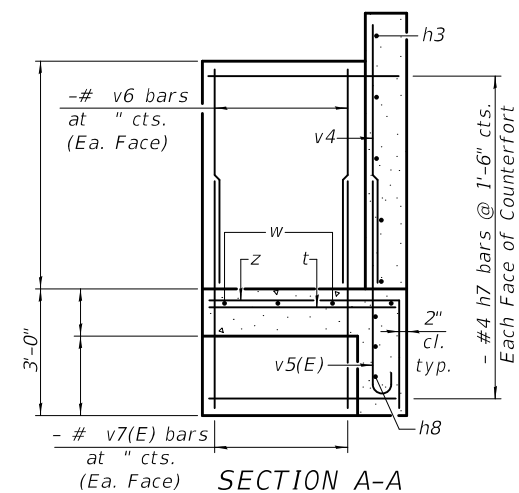
**CULVERT DETAILS**  
**STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		



### BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h5		#		
h6		#		
h7		#		
h8		#		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
w1		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:

Notes:  
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

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*TSB-SC-LT-RS*

2-17-2017

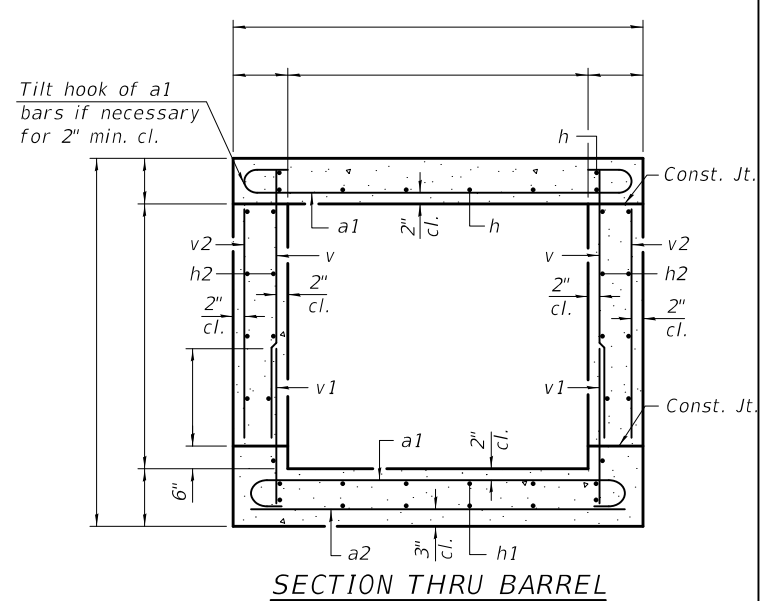
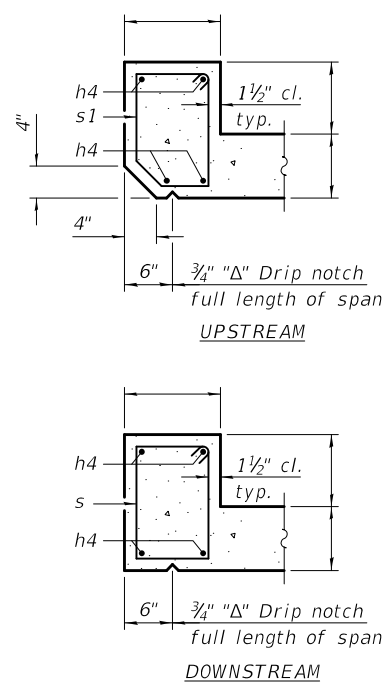
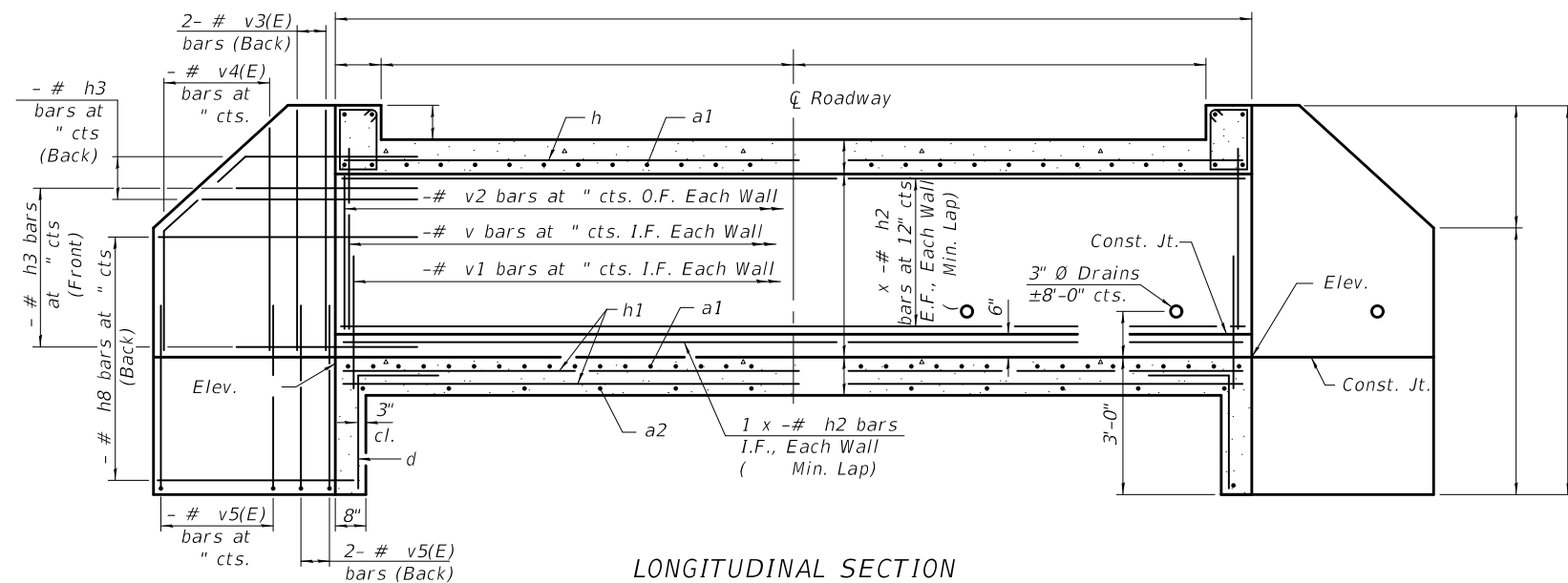
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**























**CULVERT DETAILS**  
**STRUCTURE NO.**

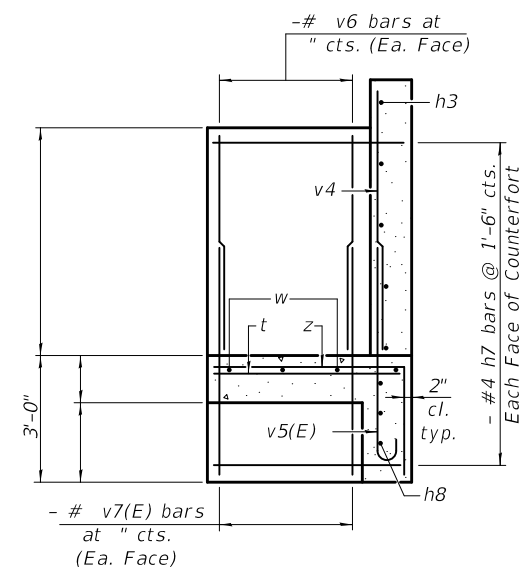
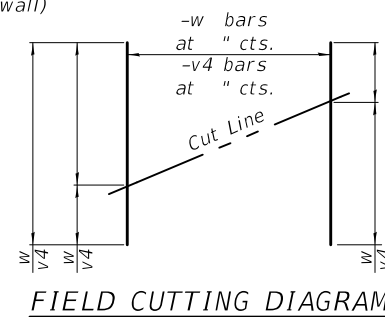
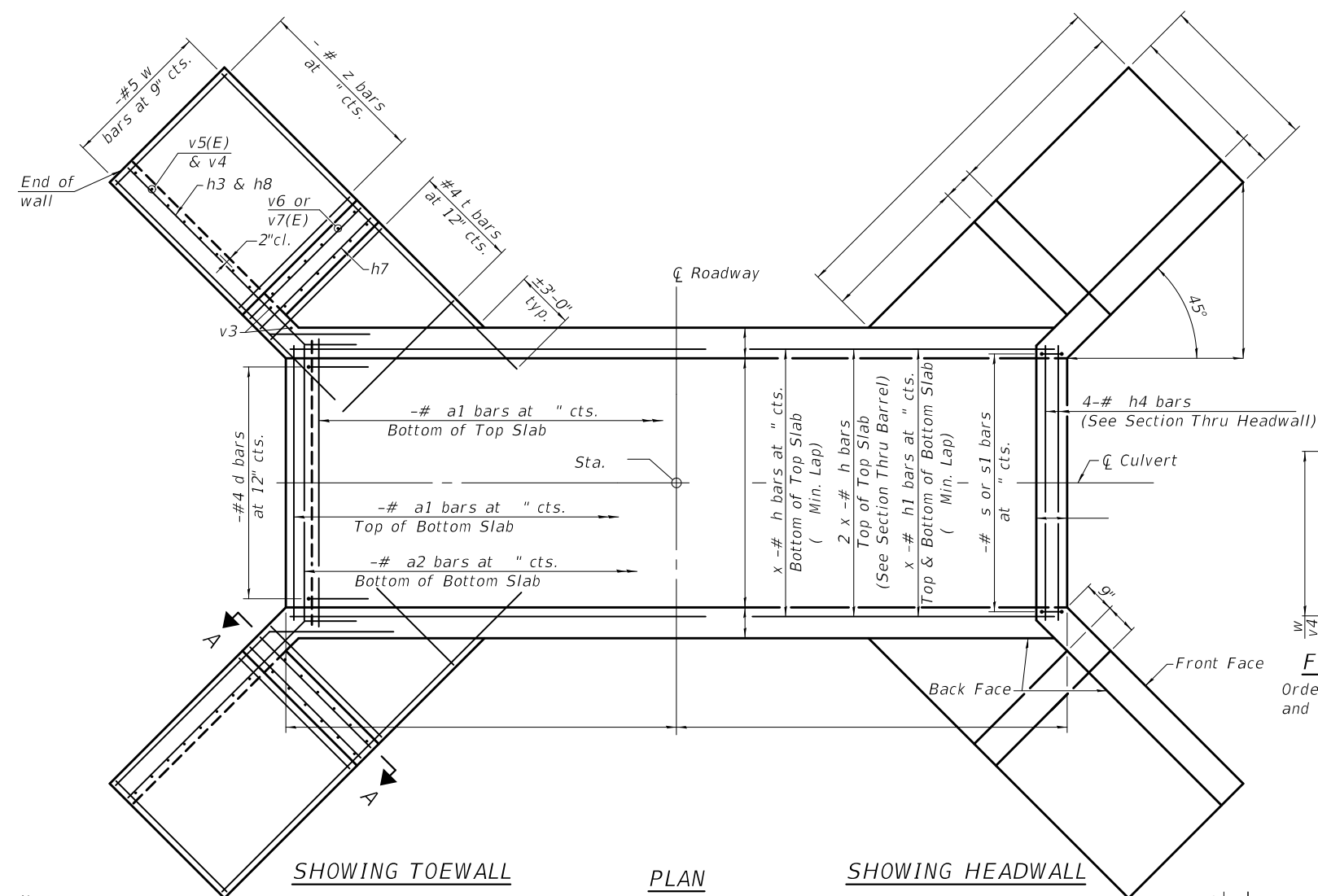
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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### BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h3		#4		
h4		#		
h7		#4		
h9		#		
s		#		
s1		#		
t		#		
v		#		
v1		#		
v3		#		
v4		#		
v5(E)		#		
v6		#		
v7(E)		#		
w		#5		
z		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Reinforcement Bars, Epoxy Coated			Pound	



Notes:  
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TSB-SC-LT-ZS

2-17-2017

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		CHECKED -	REVISED -							
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